



**Universal Care:
12 LEAD ECG ACQUISITION:
Practice Guideline**

Indications for 12-lead :
Any patient experiencing symptoms of possible cardiac origin.
Symptoms may include, but are not limited to:

- chest pain
- arrhythmia
- palpitations
- Patients with history of cardiac disease
 - CHF
 - difficulty breathing
 - syncope
- altered mental status
- dizziness
- unexplained weakness
- diaphoresis
- unexplained nausea in patients over 40
- ROSC

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    graph TD
      A[Patient assessment warrants acquisition of 12-lead] --> B[Acquire, interpret and document results of single lead ECG]
      B --> C[Acquire, interpret and document results of 12-lead ECG]
      C --> D[Refer to appropriate standard or protocol for treatment / monitoring / transport directions]
    
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Decision diamond: Patient meets any criteria for ALS transport?

Criteria for consideration of BLS or ILS transport (ALL CRITERIA MUST BE MET)

- Absence of ST elevation or depression
- patient's vital signs are within normal limits
- all responders agree with turnout

- 1st Responder
- BLS
- ILS
- ALS

Yes path: Transport ALS to appropriate facility

Reacquire 12-lead if patient has changes in clinical presentation

Update EMSCOM of any significant findings

No path: Print copy of 12-lead and turn over to transport unit (transmission not required)

Transport BLS or ILS to appropriate facility

Notes:

- Leads (electrodes) should not be removed; wires can be removed if necessary but prefer to simply unplug cable from monitor and reconnect in rig so serial 12-leads can be done (with the electrodes in the same place).



Universal Care:
ADVERSE MEDICAL EVENTS – MANDATORY REPORTING
Operational Policy

POLICY: Adverse medical events will be reported to the OEM EMS division in the established timeline for the type of event.

Event Type	Sentinel Event / Serious Safety Event	Precursor Safety Event	Serious Circumstances that may impact medical practice within the OEM EMS system
Definition	<p>A patient safety event (not primarily related to the natural course of the patient's illness or underlying condition) that reaches a patient and results in any of the following:</p> <ul style="list-style-type: none"> ➤ Death ➤ Permanent harm ➤ Severe temporary harm 	<p>Any deviation from the OEM EMS standards that reached a patient and had either minimal harm or no harm</p>	<p>Any significant EMS related event report to the fire department's risk manager or other regulatory agency including, but not limited to, the jurisdictional Fire/Police or Public Safety Commission, Occupational Safety and Health Administration, or Wisconsin Department of Health.</p>
Examples include but not limited to	<ul style="list-style-type: none"> ➤ Any deviation from an EMS policy or treatment protocol with patient harm ➤ Medication or procedural errors with harm 		<p>Any of the occurrences defined by DHS 110.54 Reasons for Enforcement Actions, Wisconsin State Statute Chapter 256 or other related Statute, Administrative Rule or local ordinance. Examples include but not limited to:</p> <p>The person made a false statement on an application for, or otherwise obtained a permit, certificate or license through fraud or error.</p> <p>The licensing examination for the person was completed through error or fraud.</p> <p>The person violated a court order pertaining to emergency medical services.</p> <p>The person's license or certification was revoked within the past two years.</p> <p>The person has an arrest or conviction history substantially related to the performance of duties as an EMS professional, as determined by the department.</p> <p>The person committed or permitted, aided or abetted the commission of an unlawful act that substantially relates to performance of EMS duties, as determined by the department.</p> <p>The person failed to a violation of the rules of DHS 110 by a licensee, certificate holder or permit holder.</p> <p>The person failed to maintain certification in CPR for health care professionals by completing a course approved by the department and has performed as a first responder or EMT.</p>



Universal Care:
ADVERSE MEDICAL EVENTS – MANDATORY REPORTING
Operational Policy

Event Type	Sentinel Event / Serious Safety Event	Precursor Safety Event	Serious Circumstances that may impact medical practice within the OEM EMS system
			<p>The person practiced beyond the scope of practice for his or her license or certificate.</p> <p>The person practiced or attempted to practice when unable to do so with reasonable skill and safety.</p> <p>The person practiced or attempted to practice while impaired by alcohol or other drugs.</p> <p>The person engaged in conduct that was dangerous or detrimental to the health or safety of a patient or to members of the general public while performing EMS duties.</p> <p>The person administered, supplied, obtained or possessed any drug other than in the course of legitimate EMS practice or as otherwise permitted by law.</p> <p>The individual engaged in inappropriate sexual contact, exposure, gratification, or other sexual behavior with or in the presence of a patient.</p> <p>The person abused a patient by any act of nonconsensual force, violence, harassment, deprivation, nonconsensual sexual contact or neglect.</p> <p>The person obtained or attempted to obtain anything of value from a patient for the benefit of self or a person other than the patient unless authorized by law.</p> <p>The person falsified or inappropriately altered patient care reports.</p> <p>The person revealed to another person not engaged in the care of the patient information about a patient's medical condition when release of the information was not authorized by the patient, authorized by law, or requested by the department in the investigation of complaints.</p> <p>The person failed or refused to provide emergency medical care to a patient because of the patient's race, color, sex, age, beliefs, national origin, handicap, medical condition, or sexual orientation.</p> <p>The person abandoned a patient.</p>

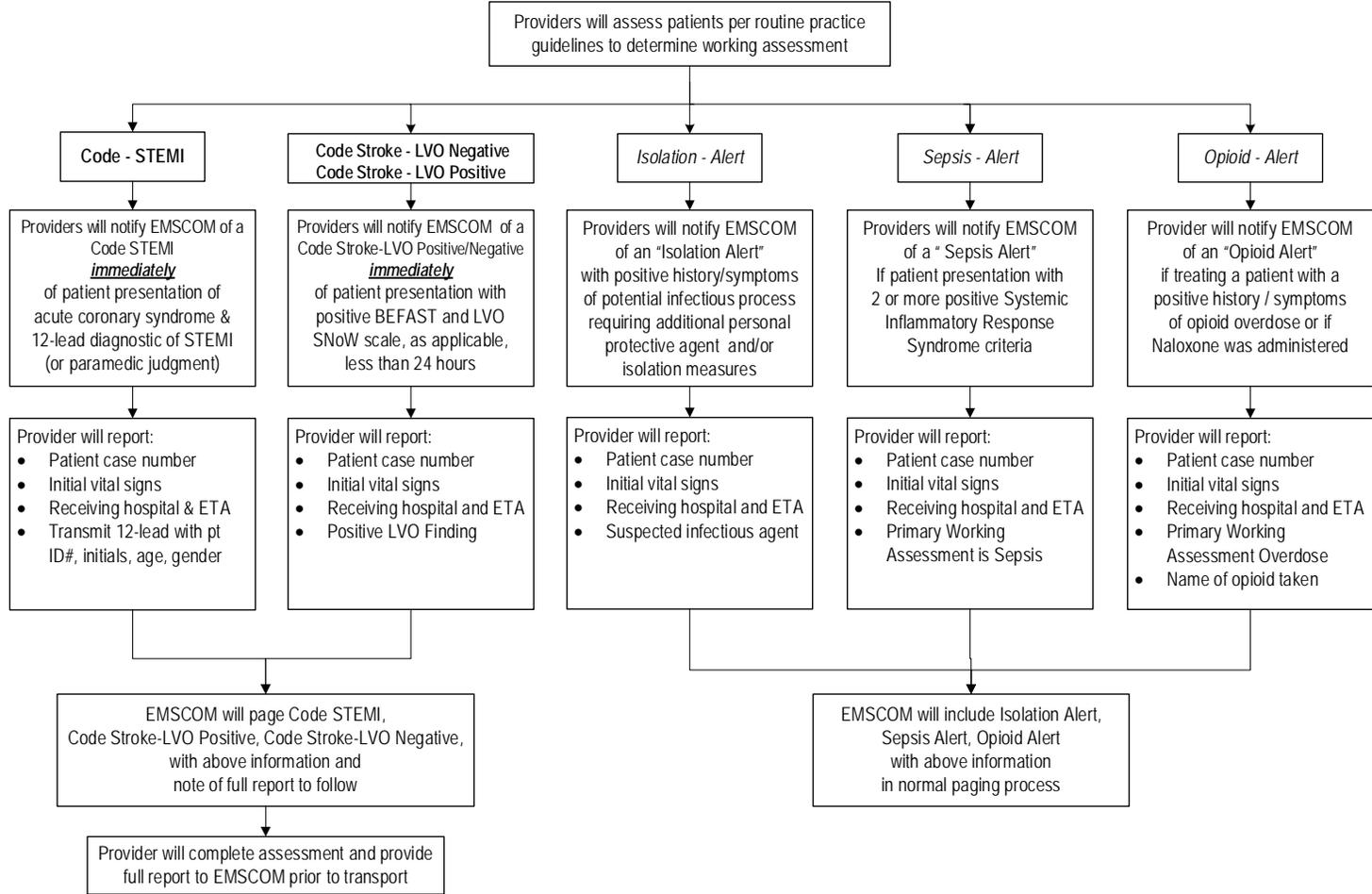


**Universal Care:
ADVERSE MEDICAL EVENTS – MANDATORY REPORTING
Operational Policy**

Event Type	Sentinel Event / Serious Safety Event	Precursor Safety Event	Serious Circumstances that may impact medical practice within the OEM EMS system
Note	Any event that has patient harm, implicates OEM EMS or partnering fire departments and is likely to be a news/media story within 24 hours.		
Timing	Immediate	Within next business day	Within next business day
Whom to contact	Medical Director AND OEM EMS Division Director 24/7 via EMSCOM at 414.278.4343	qualityems@milwaukeecountywi.gov AND Fire Department EMS Liaison	



ALERTS: ISOLATION, OPIOID, SEPSIS **CODE: STEMI, STROKE LVO POSITIVE/NEGATIVE**
Universal Care:
Practice Guideline





ALERTS: ISOLATION, OPIOID, SEPSIS

CODE: STEMI, STROKE LVO POSITIVE/NEGATIVE
Practice Guideline

Universal Care:

POLICY: Milwaukee County EMS Communications will provide early notification of the impending arrival of patients with the following working assessments:

- Suspected STEMI as identified by patient presentation of acute coronary syndrome and a 12 lead diagnostic for STEMI (or paramedic judgment)
- Suspected STROKE LVO NEGATIVE as identified by a positive BEFAST, negative LVO, and last known well (LKW) time less than 24 hours
- Suspected STROKE LVO POSITIVE as identified by a positive BEFAST, positive LVO, and last known well (LKW) time less than 24 hours
- Suspected infectious process requiring additional personal protective equipment or isolation measures
- Suspected sepsis
- Suspected opioid use

Notes:

- **Code STEMI, Code Stroke LVO Negative, and Code Stroke LVO Positive are pre-arrival notifications.** The intention is to provide the receiving hospital with as much pre-arrival notification as possible to allow the hospital to gather resources not readily available in the emergency department.
- **Isolation Alert, Opioid Alert and Sepsis Alert;** are designed to increase awareness on the behalf of the receiving emergency department to allow for focused approaches to managing patients needing isolation, experienced an opioid overdose or may be septic.

Initiated: 11/04/2013
Reviewed/Revised: 03/01/2018
Revision 5

Approved: M. Riccardo Colella, DO, MPH, FACEP
Reviewed: EMS Division Director Kenneth Sternig, RN
WI DHS ES Approval: 03/01/2018



POLICY: If the first responding EMS unit determines after patient assessment that ALS evaluation, treatment, and transport are not required, the responding ALS or ILS unit may be cancelled.

BLS and ILS units must request a Milwaukee County paramedic evaluation for patients meeting the following criteria.

Note: This does not exclude any other patient from assessment by a Milwaukee County paramedic.

1. *An EMT, physician, physician's assistant, or nurse on scene requests ALS/paramedic transport. This does not include transports that meet established criteria for interfacility transports.*
2. *Mechanism of injury includes a motor vehicle crash in which (these patients should be transported to Level I/Level II trauma center):*
 - a. Estimated crash impact speed was 40 mph or greater
 - b. Prolonged or complicated extrication was required
 - c. Passenger compartment intrusion is greater than 12 inches
 - d. Another occupant in the same vehicle was killed
 - e. The patient was ejected from the vehicle
 - f. The vehicle rolled over onto the roof
 - g. The patient was on a motorcycle or bicycle with impact speed over 20 mph
 - h. A motorcycle or bicycle rider was thrown from the cycle
 - i. A pedestrian was struck by a motor vehicle
3. *The adult patient (12 years or older) fell 20 feet or more OR a pediatric patient (less than 12 years old) fell 10 feet or more. These patients should be transported to Level I/Level II trauma center.*
4. *Injuries that include (these patients should be transported to Level I/Level II trauma center):*
 - a. Penetrating injury to the head, neck, chest, axilla, proximal extremities, abdomen, back, buttocks, pelvis or groin
 - b. Flail chest
 - c. Two or more long bone fractures (femur, humerus)
 - d. Amputation above the wrist or ankle
 - e. New-onset paralysis of traumatic origin
5. *Burn injuries to the face, airway, or body surface area greater than 18%*
6. *Glasgow Coma Scale of 13 or less*
7. *Patient experiencing status or recurrent seizures*
8. *Suspected tricyclic overdose, regardless of the number taken or present signs/symptoms*
9. *Pregnant patient at 24 or more weeks gestation with vaginal bleeding*
10. *Experiencing complicated childbirth with any of the following:*
 - a. Excessive bleeding
 - b. Amniotic fluid contaminated by fecal material
 - c. Multiple births
 - d. Premature imminent delivery
 - e. Abnormal fetal presentation (breech)
 - f. Prolapsed umbilical cord
 - g. Newborn with a pulse less than 140
 - h. Newborn flaccid or poor cry



11. Chief complaint of non-traumatic chest pain with any of the following:
 - a. Cardiac history - MI, angina, coronary bypass surgery, angioplasty or valve replacement, arrhythmia, pacemaker, automatic implanted cardiac defibrillator (AICD), bradycardia, tachycardia, heart surgery
 - b. Taking/prescribed two or more cardiac medications
 - c. Diabetes
 - d. Renal failure/dialysis
 - e. Cocaine use within the past 24 hours
 - f. Pain radiation to the neck, jaw or arm
 - g. Diaphoresis
 - h. Nausea/vomiting
 - i. Age 40 and older
12. Age 50 or older with non-traumatic pain to the neck, jaw or arm and accompanied with any of the following:
 - a. Diaphoresis
 - b. Nausea/vomiting
13. Respiratory distress – Any patient with abnormal respiratory rate or pulse oximetry and any of the following:
 - a. Inability to speak in full sentences (if normally verbal)
 - b. Retractions
 - c. Cyanosis
 - d. Poor aeration
 - e. Accessory muscle use
 - f. Wheezing
 - g. Grunting
14. Abnormal vital signs with associated symptoms
15. History or physical examination reveals a potentially life-threatening situation
16. The BLS, ILS, or ALS private provider has initiated an EMT-Basic advanced procedure and interfacility criteria are not met.
17. Patients in which EMT-Basic advanced skills were initiated; these patients also require ALS transport:
 - a. Administration of albuterol **without** complete relief of symptoms (examples: wheezing, dyspnea)
 - b. Administration of aspirin
 - c. Administration of epinephrine for allergic reactions
 - d. Assistance in self-administration of nitroglycerin
 - e. Administration of dextrose **without** complete relief of symptoms (example: altered level of consciousness after second dose of dextrose)
18. Known blood glucose level greater than 400 mg/dL **with** symptoms of DKA (polyuria, polydipsia, nausea/vomiting, abdominal pain, weakness, dizziness, altered mental status, fruity-scented breath). BLS providers must request ALS unit for known blood sugar less than 60 mg/dL. ILS may treat blood sugar less than 60 mg/dL.
19. Any infant less than 90 days old with a reported incident of an Apparent Life Threatening Event (ALTE), regardless of the infant's current status.



**Universal Care:
ALS EVALUATION REQUIRED
Operational Policy**

20. Vital signs requiring ALS evaluation:

AGE	RESPIRATIONS	PULSE	BLOOD PRESSURE	Room Air Pulse Oximetry
Newborn	Poor cry	<140	CRT > 3 sec	
<1 year	<30 or >44	<100 or >160	CRT > 3 sec	< 94%
1 – 4 years	<20 or > 40	<90 or > 140	<80 or > 110 systolic	< 94%
5 – 11 years	<16 or >26	<60 or > 120	<80 or > 130 systolic	< 94%
12 – 15 years	<10 or > 28	<60 or > 130	<90 or >140 systolic	< 94%
Adults 16 years and older	<10 or > 28	<51 or > 130	<90 or >220 systolic OR >140 diastolic	< 94%

< means less than

> means greater than

CRT = capillary refill time

Initiated: 12/06/2000
Reviewed/Revised: 03/01/2018
Revision 12

Approved: M. Riccardo Colella, DO, MPH, FACEP
Approved: EMS Division Director Kenneth Sternig, RN

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**Universal Care:
CONDUCTIVE ENERGY DEVICE (TASER) PATIENTS
Operational Policy**

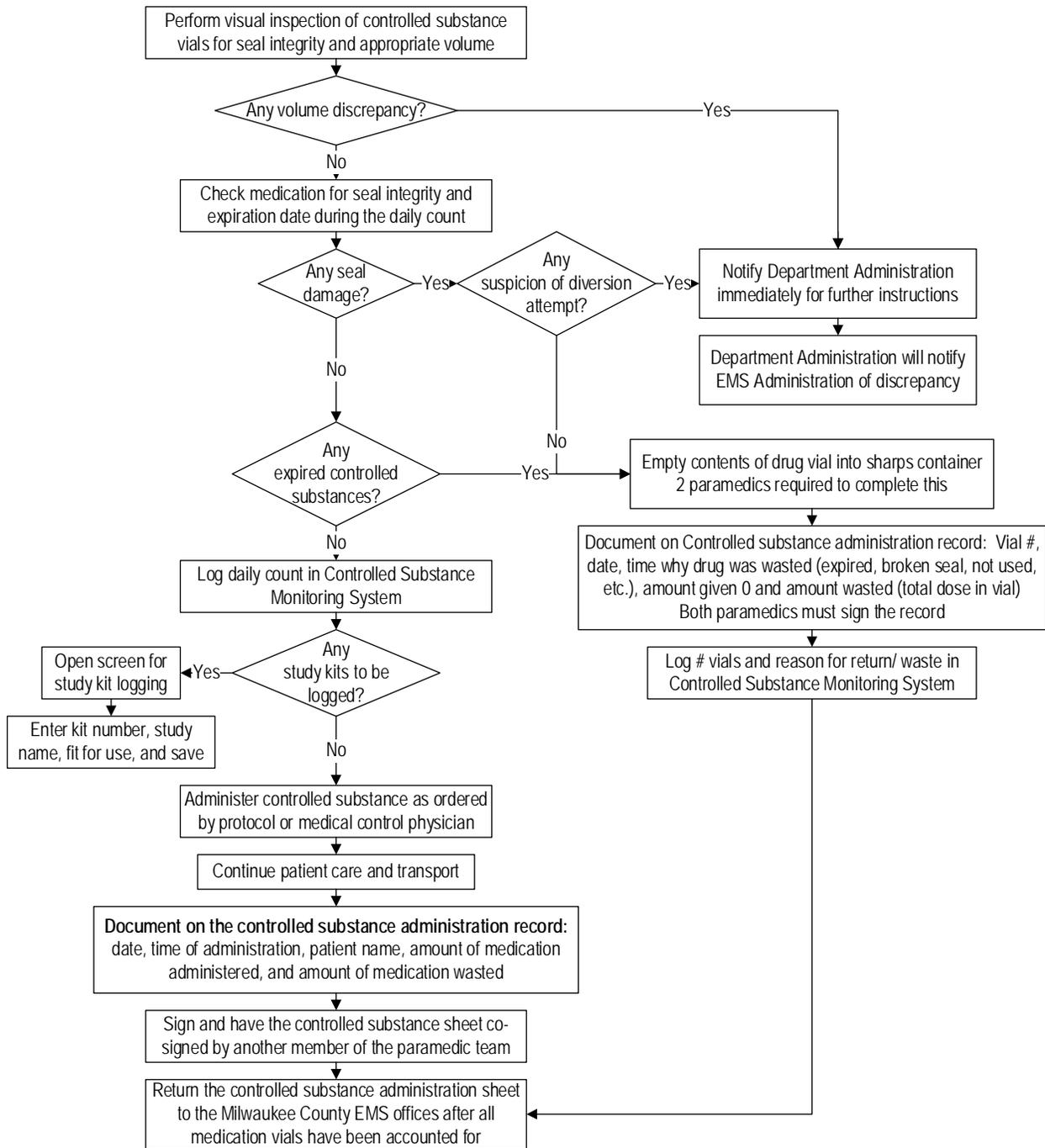
POLICY: Milwaukee County EMS providers will apply usual Standards of Care, Medical Protocols, Standards for Practical Skills, and Operational Policies set forth by Milwaukee County EMS to patients who have been subjected to the use of a conducted energy devices (also known variably as “conducted energy weapon”, “electric control device”, “electronic restraint”, “tazer”, “taser”, or “stun gun”).

- I. Need for Medical Evaluation
 - A. Available scientific evidence suggests that not all patients subjected to a conducted energy device will require an EMS evaluation.
 - B. If requested/called by law enforcement, EMS providers will conduct a patient evaluation applying usual standards of care, protocols, skills, and policies.
- II. Need for Transport to Receiving Hospital
 - A. Available scientific evidence suggests that not all patients subjected to a conducted energy device will require hospital evaluation.
 - B. Patients will be transported if any of the following situations apply:
 1. Any patient age 12 years or younger
 2. Pregnant patients greater than or equal to 20 weeks in gestation
 3. Any abnormality of vital signs (see Standard of Care – Normal Vital Signs, with the exception that adult blood pressure of over 160/100 or below 100/70 is considered abnormal in these circumstances)
 4. Use of more than 3 device shocks on a patient
 5. Barbs that have hit in the following areas
 - a. Eyes/Orbits
 - b. Neck
 - c. Genitalia
 6. Significant trauma or mechanism of injury related to events before, during, or after device application (e.g. falls, MVC)
 7. Burns, if greater than mild reddening of the skin between the barbs
 8. Barbs that cannot be removed using usual methods (refer to Standards of Care – Conducted Energy Device Barb Removal)
 9. Persistent agitated behavior that is not responsive to verbal de-escalation
 10. History of coronary disease, CHF, cardiac arrhythmias, or AICD/pacer
 11. Other abnormal or unusual signs or symptoms persisting after shock (for example, numbness, paralysis, shortness of breath, chest pain, dizziness, loss of consciousness, profuse sweating, or others)
 - C. Patients will also be transported if, in the judgment of EMS or law enforcement, further evaluation is warranted.
 - D. Transport can occur at the level deemed appropriate by on-scene EMS personnel (follow usual protocols for BLS versus ALS level transport).



**Universal Care:
CONTROLLED SUBSTANCE DOCUMENTATION & INSPECTION
Operational Policy**

POLICY:Administration of controlled substances will be uniformly documented to accurately reflect usage. Controlled substances will be visually inspected for seal damage and volume discrepancies.





Universal Care:
CONTROLLED SUBSTANCE DOCUMENTATION & INSPECTION
Operational Policy

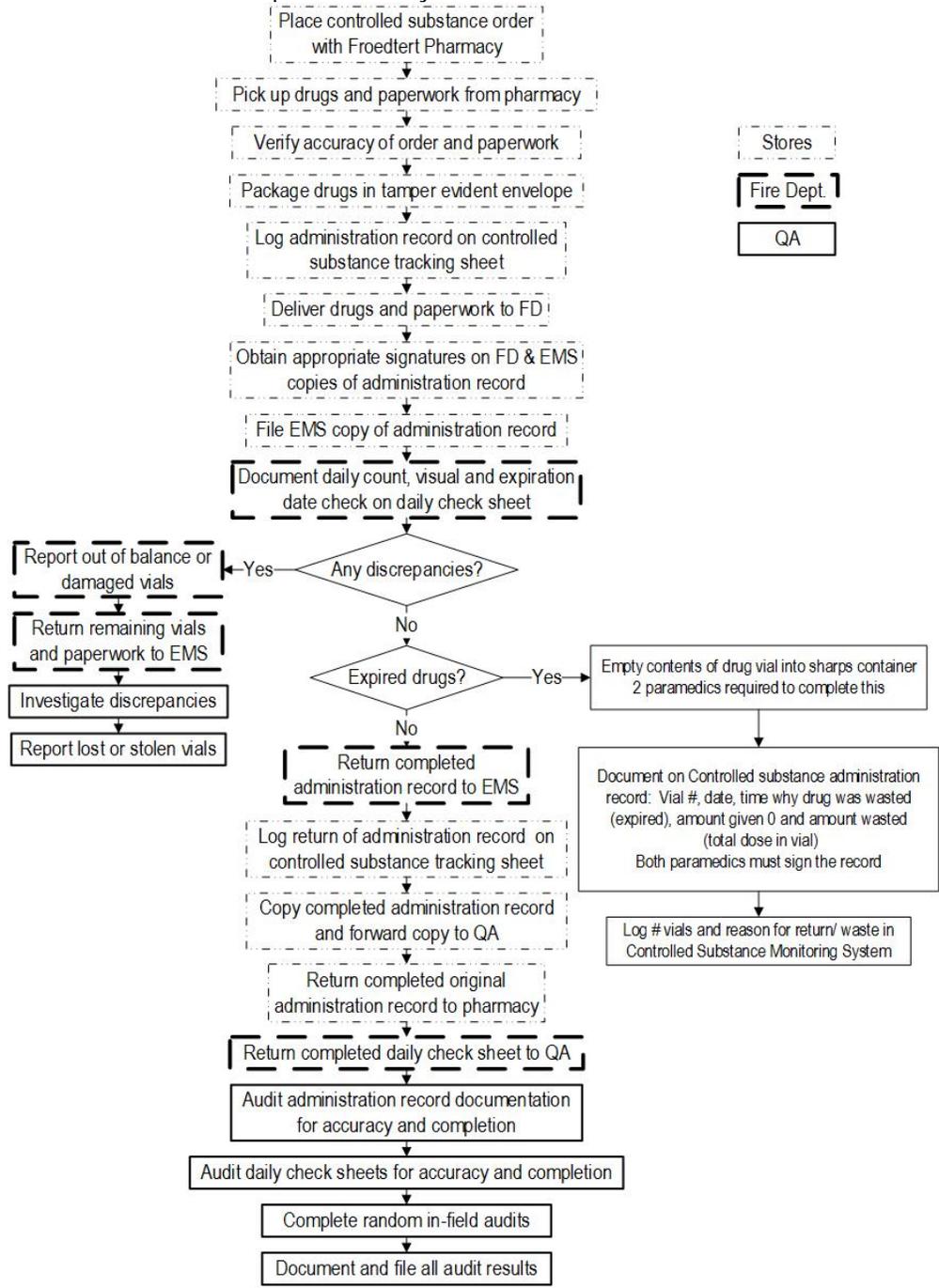
NOTES:

- MC EMS will perform routine visual checks as well as auditing each MED unit to assure documentation is complete and accurate.
- Records will also be reconciled with the FMLH pharmacy at the end of the year.



**Universal Care:
CONTROLLED SUBSTANCE MANAGEMENT BY AREA OF RESPONSIBILITY
Operational Policy**

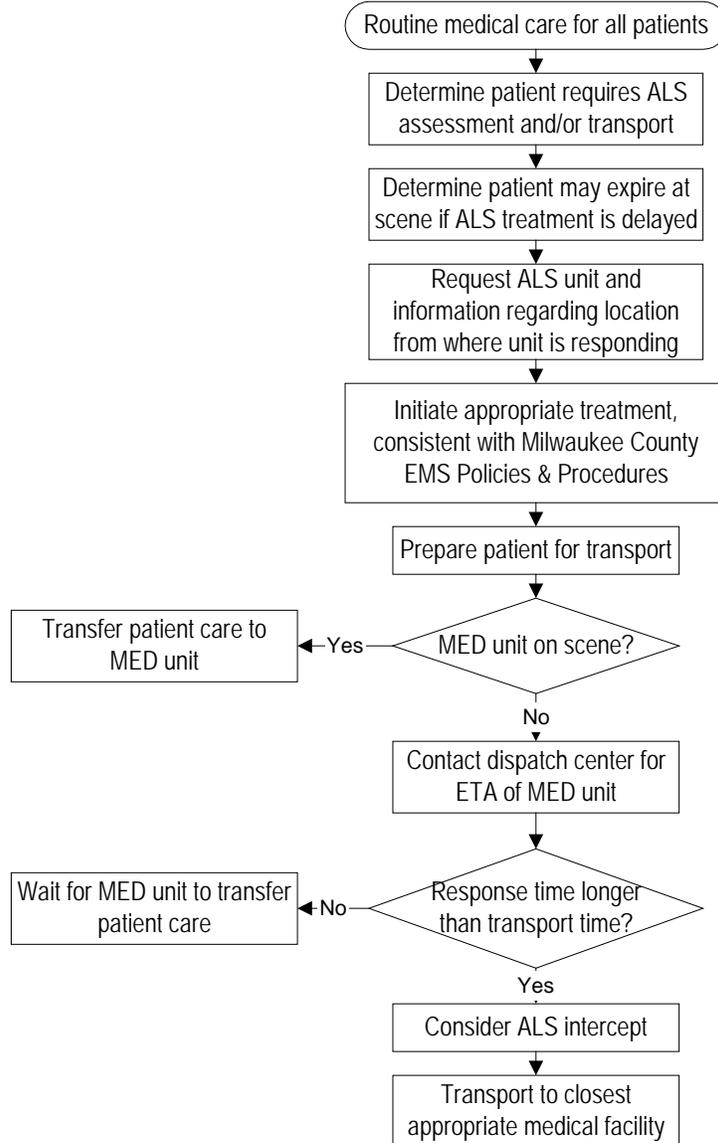
POLICY: Management of controlled substances within the Milwaukee County EMS system is a collaborative effort of several system stakeholders to ensure compliance with system and federal standards.





**Universal Care:
DEVIATION FROM ALS EVALUATION (LOAD AND GO)
Operational Policy**

POLICY: If the EMTs on scene determine that a patient may expire on scene if ALS treatment is delayed, the EMTs may opt to Load & Go transport the patient to the closest appropriate open medical facility.



NOTES:

- Potential Load & Go situations exist if:
 - The patient has an uncontrolled airway
 - The patient is bleeding to death
 - The patient has penetrating trauma to the thorax or abdomen
 - The patient is experiencing complications of childbirth
- Documentation on the run report *must* support Load & Go transport decision



Universal Care:
ELECTROCARDIOGRAPHIC (ECG) MONITORING
Operational Policy

POLICY:

- All patients evaluated by the paramedic team will be monitored in accordance with the standards of care, policies and protocols of Milwaukee County EMS.
- Standard Lead II configuration will be used for initial evaluation and continuous monitoring of the ECG. A 12-lead ECG will be obtained and transmitted for any patient experiencing symptoms of suspected cardiac origin.
- A six inch or longer strip will accompany the patient to the hospital
- ECG monitoring of a patient under the care of a paramedic team must be done by a licensed paramedic. BLS and other non-paramedic personnel may not be assigned nor assume responsibility to perform continuous ECG monitoring.
- Any change in rhythm will be documented on the run report and an attempt will be made to obtain a six inch strip of the new rhythm to be left with the patient at the hospital.
- The paramedic team will transmit an ECG "burst" to the Communications Base at the request of the medical control physician, and at least prior to:
 - Requesting a medical control physician for the call
 - Patient care intervention
 - Patient re-assessment (e.g. stop CPR)
 - Request to stop resuscitation efforts
- This policy does not exclude any patient from ECG monitoring or the paramedic team from transmitting an ECG burst to the Communications Base. Medical control should be contacted for medical orders when appropriate for symptomatic patients.



Universal Care:
EMS COMMUNICATIONS NOTIFICATION
Operational Policy

POLICY: Upon dispatch, a unit staffed as a dedicated ALS or as an ALS/BLS unit will contact the Milwaukee County EMS Communications Center by radio. Contact with medical control is to be made for medical orders not covered by protocol.

Paramedics may request medical control for advice in unusual circumstances e.g. refusal of care/transport, or when uncomfortable with or unsure of treatment options. ALS or ALS/BLS units transporting a patient without on-line medical control will provide appropriate medical information about the patient to the Communications Center for relay to the receiving facility. When paramedics need medical control or are ready to provide a report during transport, a frequency should be requested.

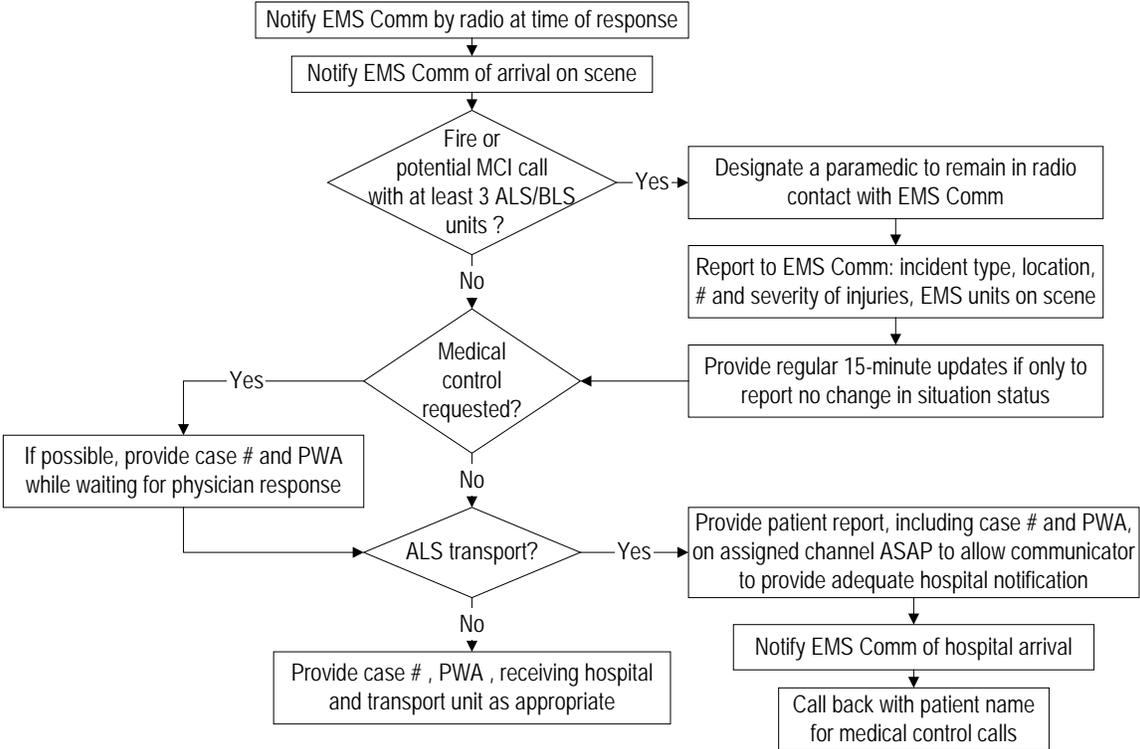
The ALS or ALS/BLS unit will notify the Communications Center of the disposition of the call, the patient's report number and primary working assessment for every patient assessed, regardless of transport disposition.

ALS or ALS/BLS units responding to a fire call or potential mass casualty incident will notify the Communications Center and remain on the call-in channel unless otherwise directed by a communicator. If three or more ALS or ALS/BLS units are dispatched to a single event, one of the paramedics on scene will be designated to contact EMS Communications with the following information:

- Type of incident
- Location of incident
- # and severity of injuries
- ALS or ALS/BLS units on scene
- The designated unit personnel will provide updates at regular 15-minute intervals, if only to report no change in situation status.

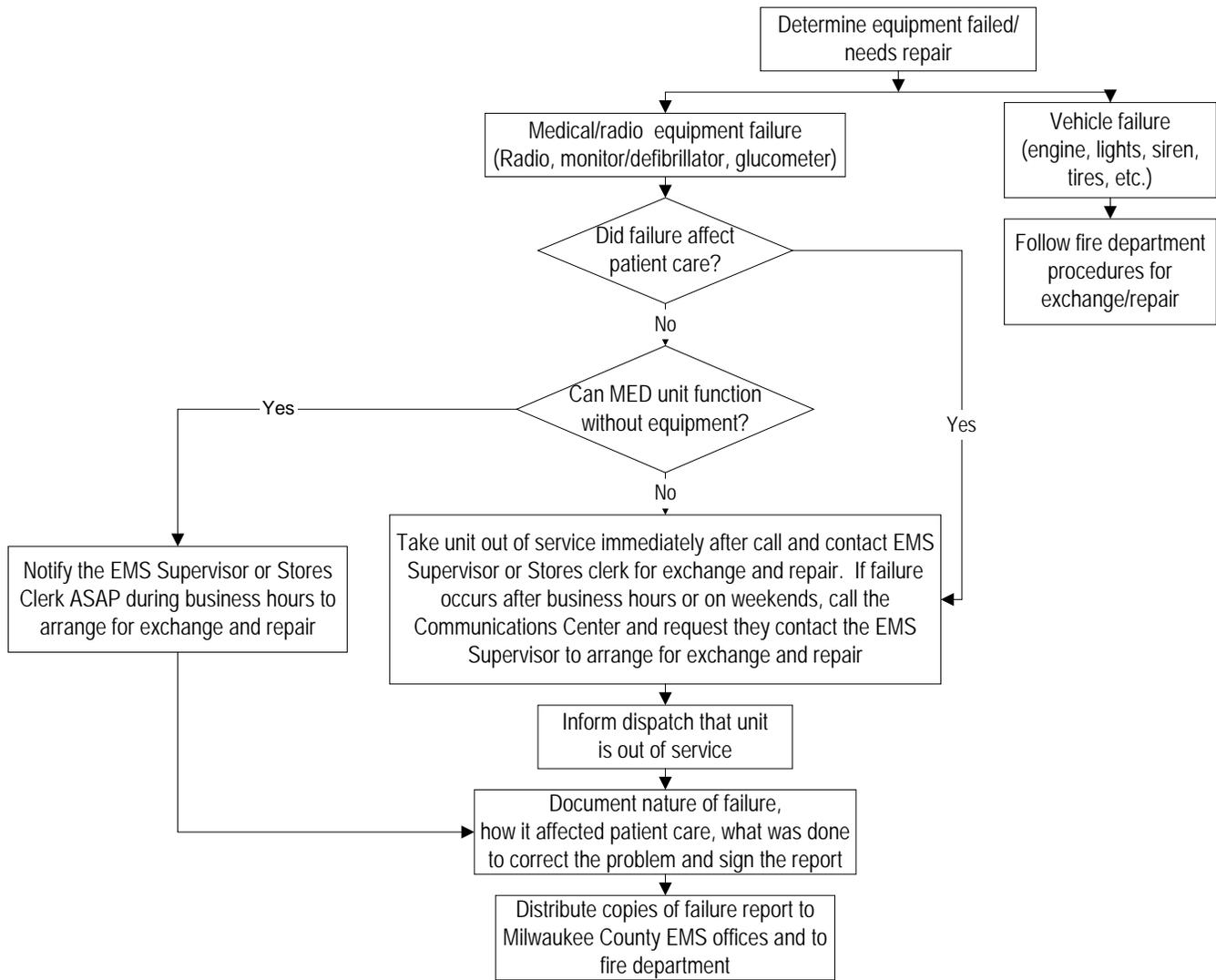


**Universal Care:
EMS COMMUNICATIONS NOTIFICATION
Operational Policy**





**Universal Care:
EQUIPMENT FAILURE / EXCHANGE
Operational Policy**



NOTES:

- If it becomes necessary to change to a back-up vehicle, test all radios prior to changing to the new vehicle. Test radios again when returning to the repaired vehicle.
- The MED unit personnel are responsible for notifying the fire department that repairs or vehicle changeovers are being made.
- Equipment that is out of service or fails on a call should be documented on the run report in the appropriate section.
- Notify the Quality Manager with details of failures affecting patient care. The Quality Manager will file the necessary FDA reports.



**Universal Care:
EQUIPMENT SUPPLIES
Operational Policy**

Each paramedic unit is responsible for labeling all hardware (radios, monitors, splints, kits, etc.) in their inventory with their department and unit designation.

A current log of items which must be left with a patient at a hospital will be maintained by the paramedic unit and those items retrieved as soon as possible. The log should include the type of equipment, quantity, hospital location, date left, patient or run number and date retrieved.

When Items are missing from the inventory, they are to be reported immediately to the appropriate fire department officer and to OEM-EMS Division as soon as possible but no later than the next regular business day.

Approved inventory lists for equipment and supplies are available from Milwaukee County EMS. A copy of the kit setup is required to be submitted and kept on file with Milwaukee County EMS on an annual basis. Any piece of equipment or supply not specifically included cannot be present on the vehicle or used by paramedics without the written permission of the Medical Director. Proposals to add new equipment must include in-service, evaluation and continuing education information and a fiscal impact statement.

Essential equipment must be on the paramedic unit and operational in order for the unit to be in service and respond to requests for emergency medical services. This essential equipment includes:

- Airway Kit
- Medication Kit
- Suction
- Oxygen Kit
- Stretcher
- Communications equipment (the cellular telephone on the 12 Lead may be used for emergency communications if the radio system fails)
- Monitor-defibrillator



**Universal Care:
HELICOPTER EMS – STATE POLICY
Operational Policy**

POLICY: Milwaukee County Emergency Medical Services will request air ambulance transport utilizing the Wisconsin Helicopter Emergency Medical Services (HEMS) Guidelines:

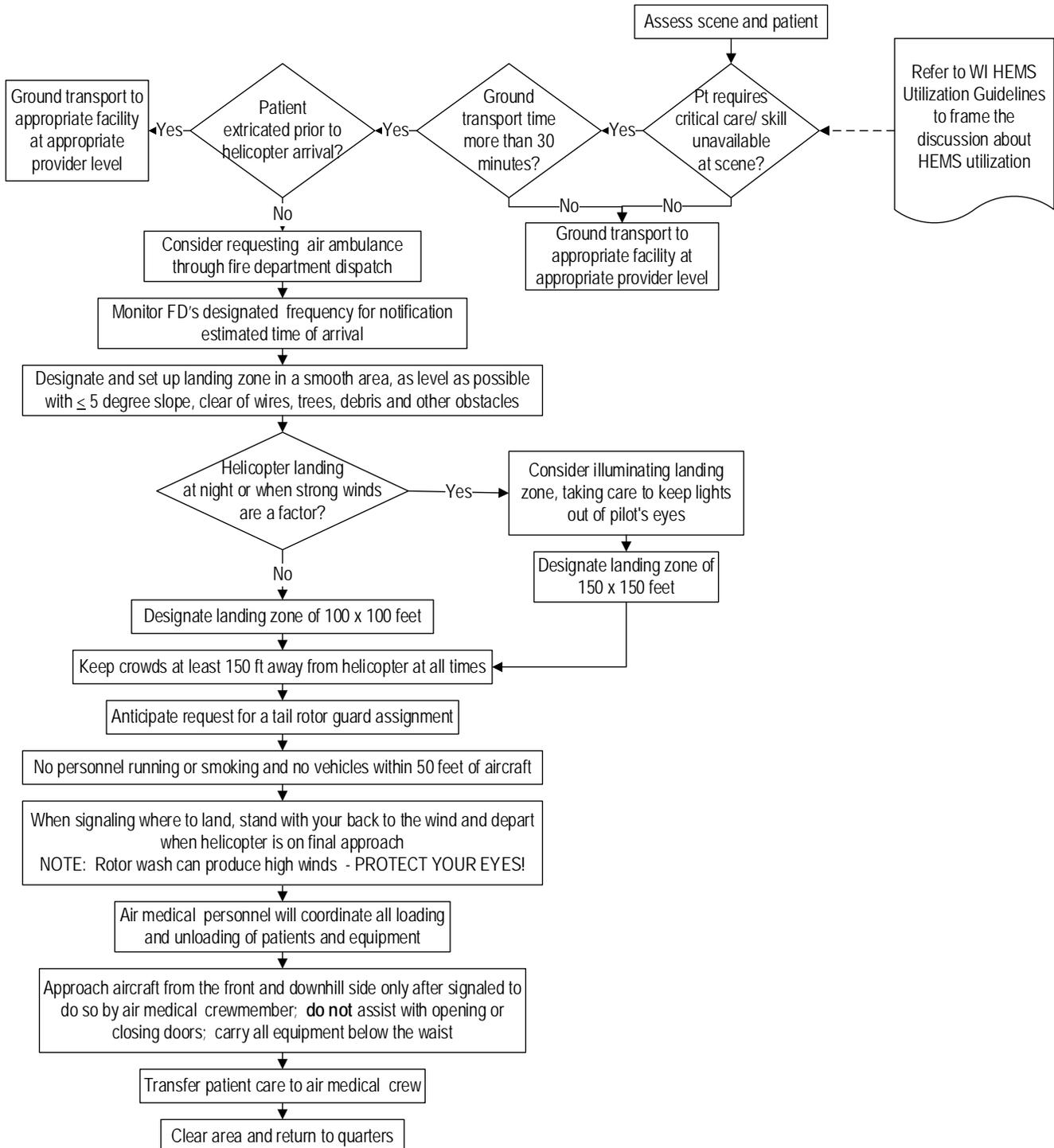
- A. HEMS utilization is a medical decision requiring appropriate oversight and should be integrated within regional systems of care.
- B. HEMS may provide a time savings benefit to patients with time sensitive emergencies¹ in reaching hospitals that can provide interventions IF the patient can be delivered during an interventional window² AND Ground Emergency Medical Services (GEMS) are not able to appropriately deliver the patient to definitive care within that interventional window.
 1. Examples include: Injured patients meeting the State of Wisconsin Field Trauma Triage Guidelines Category 2 or 3 who are more than 30 minutes of ground travel to the closest American College of Surgeons (ACS) verified Level I or Level II trauma center.
 - a. HEMS utilization for mechanism of injury or special population alone (Category 4 or 5) lacks clear evidence of benefit. Since these patients may not need the resources of the highest trauma level facility in a region, use of HEMS should be carefully considered. Standing protocols or online medical consultation may offer individual guidance.
 2. Patients with acute STEMI needing transportation to a regional percutaneous coronary intervention (PCI) capable hospital where ground transportation exceeds an interventional window.
- C. HEMS may provide clinical resources to patients needing critical care services if unable to obtain critical care services by ground emergency medical services (GEMS) (e.g., inter-facility transfer).
- D. HEMS may provide a mode of transport for geographically isolated, remote patients independent of emergency medical urgency (e.g., from an island) although this mode should be carefully considered.
- E. HEMS may provide a resource to local GEMS systems during disasters and times of low community resources.
- F. HEMS have unique risks of transport, including economic.
- G. Hospital destination and mode of transport are two separate and distinct clinical issues.
- H. Mode of transport decisions pose unique challenges in developing evidence-based transport guidelines.

¹A time-sensitive emergency can be defined as an acute, life-threatening medical or traumatic event that requires a time-critical intervention to reduce mortality and/or morbidity. Examples include major systems trauma, ST elevation myocardial infarction (STEMI) and stroke.

²An interventional window can be defined as the period of time during which mortality or morbidity is likely to be reduced by the administration of pharmaceutical agents, medical procedures or interventions. An interventional window should be based on available national consensus guidelines such as the American Heart Association's first medical contact or door to balloon time. The "Golden Hour" of trauma refers to the core principle of rapid intervention in trauma cases, rather than the narrow meaning of a critical one-hour time period. There is no evidence to suggest that survival rates drop off after 60 minutes.



**Universal Care:
HELICOPTER EMS – STATE POLICY
Operational Policy**



NOTES: FFL response time is approximately 20 minutes from request to arrival at scene within Milwaukee County.



**Universal Care:
HIPAA COMPLIANCE & CONFIDENTIALITY
Operational Policy**

POLICY: Federal legislation and Wisconsin "confidentiality" laws rigorously protect patient health information. Both federal and State regulations must be followed to ensure patient privacy protection.

All EMS Provider agencies that are considered covered entities under the federal Health Insurance Portability and Accountability Act of 1996 (45 C.F.R. parts 160 & 164) are required to become and maintain compliance with the HIPAA Privacy Rule, Security Rule and Electronic Data Exchange regulations. All Fire Departments in Milwaukee County and Milwaukee County EMS are considered covered entities.

As outlined by HIPAA guidelines, covered entity agencies will appoint a designated Privacy Officer and Security Officer to develop, distribute, and enforce policies and procedures for their staff on agency specific privacy and security practices and provide formal HIPAA training for all their staff.

Milwaukee County EMS endorses and expects all EMS Providers working under Milwaukee County Medical Direction to follow their Agency's internal policies and procedures for privacy and security practices and receive HIPAA training. Any inadvertent, unintentional or negligent act which violates a patient privacy policy must be reported to their Agency's Privacy Officer.

STEPS to ACHIEVING HIPAA COMPLIANCE:

1. Appoint and Document a HIPAA Compliance Officer
2. Conduct a Risk Analysis
3. Develop/Implement HIPAA Policies and Procedures
4. Train & Appropriately Sanction Workforce
5. Identify Your Business Associates & Enter into Agreements
6. Grant Patients their HIPAA Rights and Distribute Your Notice of Privacy Practices
7. Implement Administrative, Physical and Technical Safeguards
8. Respond Appropriately to HIPAA Violations & Breaches
9. Have a Complaint-Resolution Process
10. Comply with HIPAA Recordkeeping Requirements

HIPAA Resources for Agencies:

Free:

www.hhs.gov/ocr/privacy (U.S. Department of Health & Human Services)

<http://hipaacow.org> (Health Insurance Portability and Accountability Act Collaborative of Wisconsin)

Numerous Documents for Privacy, Security, Risk Toolkit

Privacy 101 Webinar

HIPAA Education ppt slides

Fee based:

www.pwwemslaw.com (The Ambulance Service Guide to HIPAA Compliance, Page, Wolfberg & Wirth law firm)

Complete guide to compliance

Forms and Numerous Policy & Procedure Templates

HIPAA Training DVD

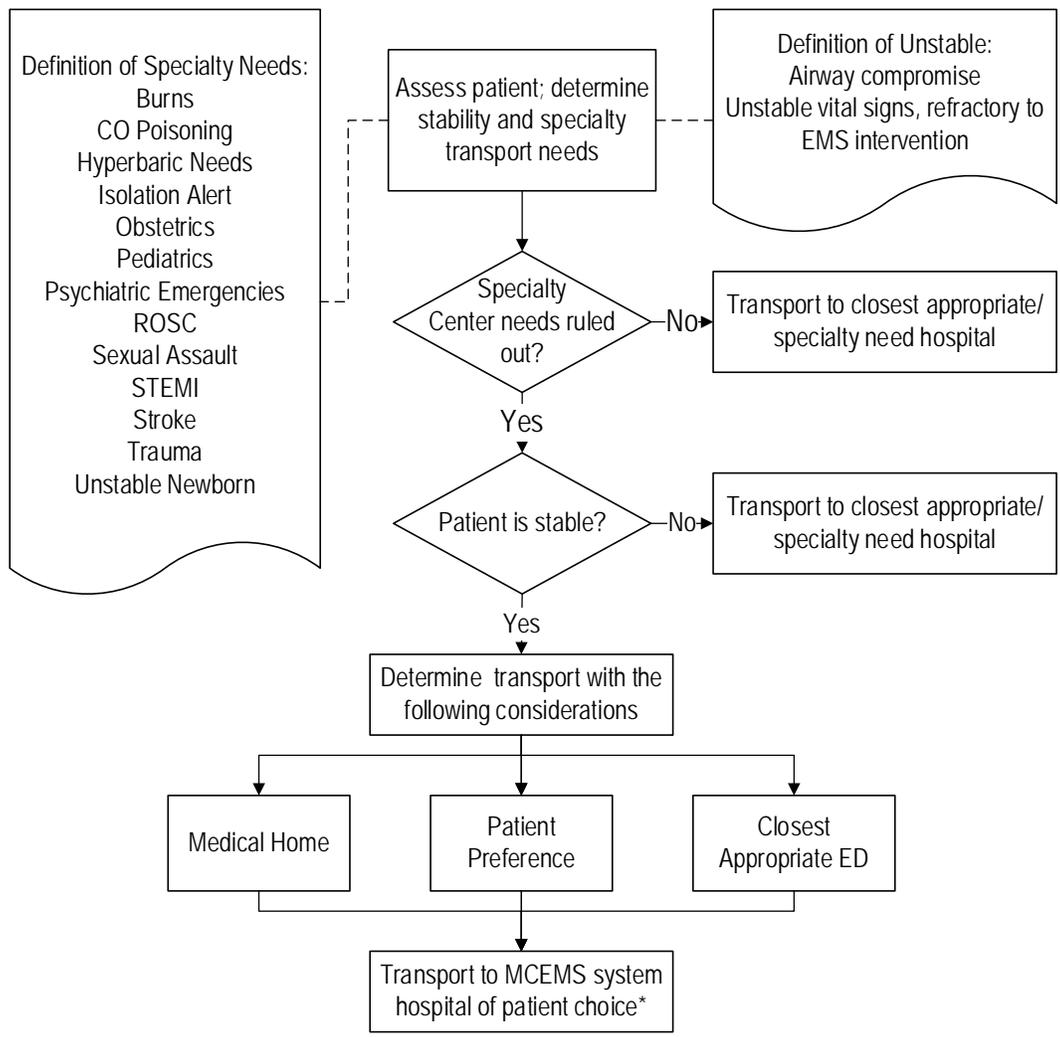


**Universal Care:
HOSPITAL DESTINATION
Operational Policy**

POLICY: This policy provides principles and decision-making guidance for patients, EMS providers and hospitals within the MCEMS system.

Guiding Principles

- EMS and health care systems will partner to ensure access to safe and high quality care.
- Patients have the right to make informed health choices including hospital destination within the Milwaukee County EMS System; care outside of an informed patient care choice may impact safety, quality and economic risks.



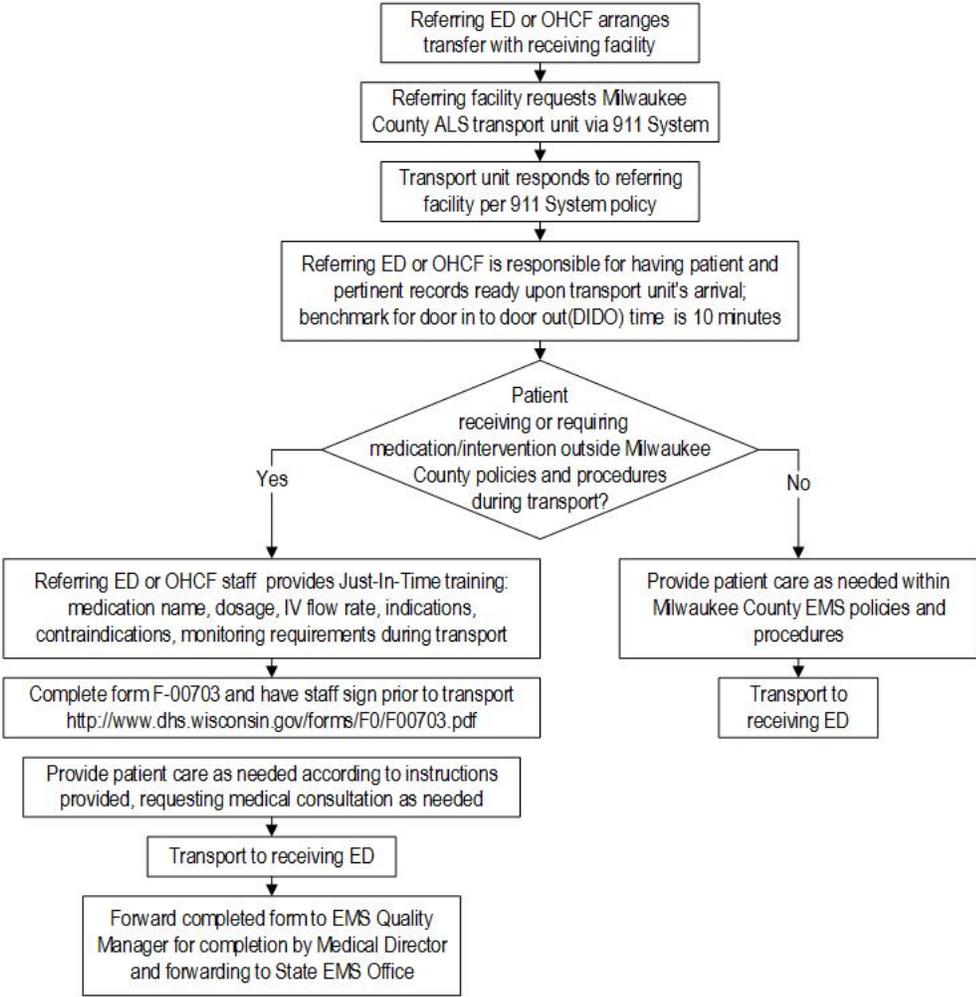
- *EMSystem definition of Internal Disaster: Facility is closed due to internal disaster situation such as physical plant deficiency. In this case, an alternate destination is required.
- Internal Disaster is EMSystem designation recognized by MCEMS as "closing" a hospital to ambulance transport.



**Universal Care:
INTERFACILITY TRANSPORTS
Operational Policy**

Scope of Practice may include:	Scope of Practice does not include:
Patients paralyzed and intubated Pre-administration of pain medication and/or antibiotics Blood products already administered	Managing chest tubes Administration of blood products IV pumps Management of other medical devices

POLICY: Upon request, Milwaukee County ALS units will transport a patient from one emergency department (ED) or outpatient health care facility (OHCF) to another receiving emergency department within the Milwaukee County EMS System in accordance with System policies and procedures.



- NOTES:**
- Even though the patient appears stable and transport is for urgent continuing care (STEMI > Cath lab, trauma > Trauma Surgery, etc.):
 - Attempt to meet 10-minute door-in-door-out (DIDO) time standard, documenting any cause for delay in transport
 - Milwaukee County Paramedics may not provide care outside the policies and procedures of Milwaukee County EMS Plan. Pertinent records that usually accompany the patient may include, but are not limited to lab and/or x-ray reports, ED treatment, and nursing notes.



**Universal Care:
LIGHTS AND SIREN WITH PATIENTS ONBOARD
Operational Policy**

POLICY:

The decision to utilize warning lights and siren transport with a patient on-board is a medical decision and will be determined by the judgment of the highest level provider attending the patient.

Warning lights and siren transport may be appropriate with time sensitive conditions (such as Code Stroke, Code STEMI, or patients meeting physiologic or anatomic criteria for Level I/II trauma center transport), impending or obstructed airway concerns not responding to EMS intervention, or other conditions where EMS intervention is unable to manage the patient condition with resources available based on clinical judgment.

Warning lights and siren transport should not be used for patients not described above.

Use of warning lights and sirens will be documented on the patient care record.

- Use of warning lights and siren is a medical decision.
- Use of warning lights and siren has safety implications to patients, providers and the public.
- Use of warning lights and siren transport to the hospital has little impact on patient care outcome.
- Use of warning lights and siren saves very little time based on scientific literature.
- The provision of ALS care and mode of transport are independent; one does not necessarily determine the other.
- Traffic conditions should not be a determining factor in absence of a truly life-saving or time sensitive emergency.
- Mode of transport is an important tool in developing a culture of patient safety.



**Universal Care:
MANAGEMENT OF DECEASED PATIENTS
Operational Policy**

POLICY: Deceased patients will be managed in a professional and respectful manner, to meet the needs of the community, under the guidelines developed in conjunction with the Milwaukee County Medical Examiner's Office.

DEFINITIONS:

Resuscitation attempt: Initiation of basic or advanced life support procedures in an attempt to reverse cardiac arrest of medical or traumatic origin. These procedures include, but are not limited to, CPR, placement of an advanced airway, cardiac monitoring/defibrillation.

Suspicious death: Patient's death is considered to be from other than natural causes, including suspected sudden infant death syndrome (SIDS), crimes, suicide, and accidental death.

Non-suspicious death: Patient's death is apparently due to natural causes.

Potential crime scene: A location where any part of a criminal act occurred, where evidence relating to a crime may be found, or suspicions of a criminal act may have occurred.

PROCEDURE:

Resuscitation will be initiated on all patients in cardiac arrest, unless one of the following conditions is met:

- Decapitation
- Rigor mortis
- Tissue decomposition
- Dependent lividity
- Valid State of Wisconsin Do-Not-Resuscitate order or Physician Orders for Life-Sustaining Treatment
- Fire victim with full-thickness burns to 90% or greater body surface area

A patient may be pronounced en route to a hospital if condition warrants. In such case, the destination should be changed to the Medical Examiner's Office.

EMS unit should notify the Medical Examiner prior to redirecting transport.

The EMS unit (ALS or BLS) responsible for assessing (no resuscitation attempted) or treating (resuscitation attempted) shall call the Medical Examiner's Office to provide a firsthand account of the scene and patient history **before leaving the scene.**

If the Medical Examiner's Office cannot be reached, the ME has requested that at a minimum the following information should be left on the ME phone message:

- Date
- Name of EMS provider calling
- EMS vehicle number
- Patient's name
- Patient's age
- Pronouncing physician name (OLMC or EMS Medical Director's name) if resuscitation was attempted
- Time patient was pronounced if resuscitation was attempted



**Universal Care:
MANAGEMENT OF DECEASED PATIENTS
Operational Policy**

For a potential crime scene:

- Notify law enforcement if not already involved.
- Include potential crime information in report to Medical Examiner's Office.
- Observe, document and report to law enforcement anything unusual at the scene.
- Protect potential evidence
 - Do not "clean up" the body
 - Leave holes in clothing from bullet or stab wounds intact
 - Do not touch or move items at the scene
 - Observe, document and report to law enforcement and the Medical Examiner's Office any items disturbed by EMS at the scene
- Turn the body over to law enforcement
- Law enforcement has the legal responsibility to maintain scene integrity

For all other patients:

- Do not remove lines or tubes from the deceased
- Do not "clean up" the body
- Do not disturb the scene
- If covering the body, use only a clean, disposable blanket

Disposition of the body:

- Do not leave the body unattended
- The body may be turned over to law enforcement, which has the legal responsibility to maintain scene integrity
- If approval is granted by the Medical Examiner's Office, the body may be turned over to a funeral home
- If the resuscitation attempt took place in the ambulance, include the information in your report and transport to the Medical Examiner's Office at 933 West Highland Avenue
 - Do not transfer the body to another transport vehicle unless the municipality would be left with no available responding ALS unit; refer to individual municipal policy
 - If the death is considered suspicious, a police officer or detective may accompany the body in the ambulance to the Medical Examiner's Office to maintain integrity of evidence
- Transport to a funeral home shall be determined by individual municipal policy

Documentation:

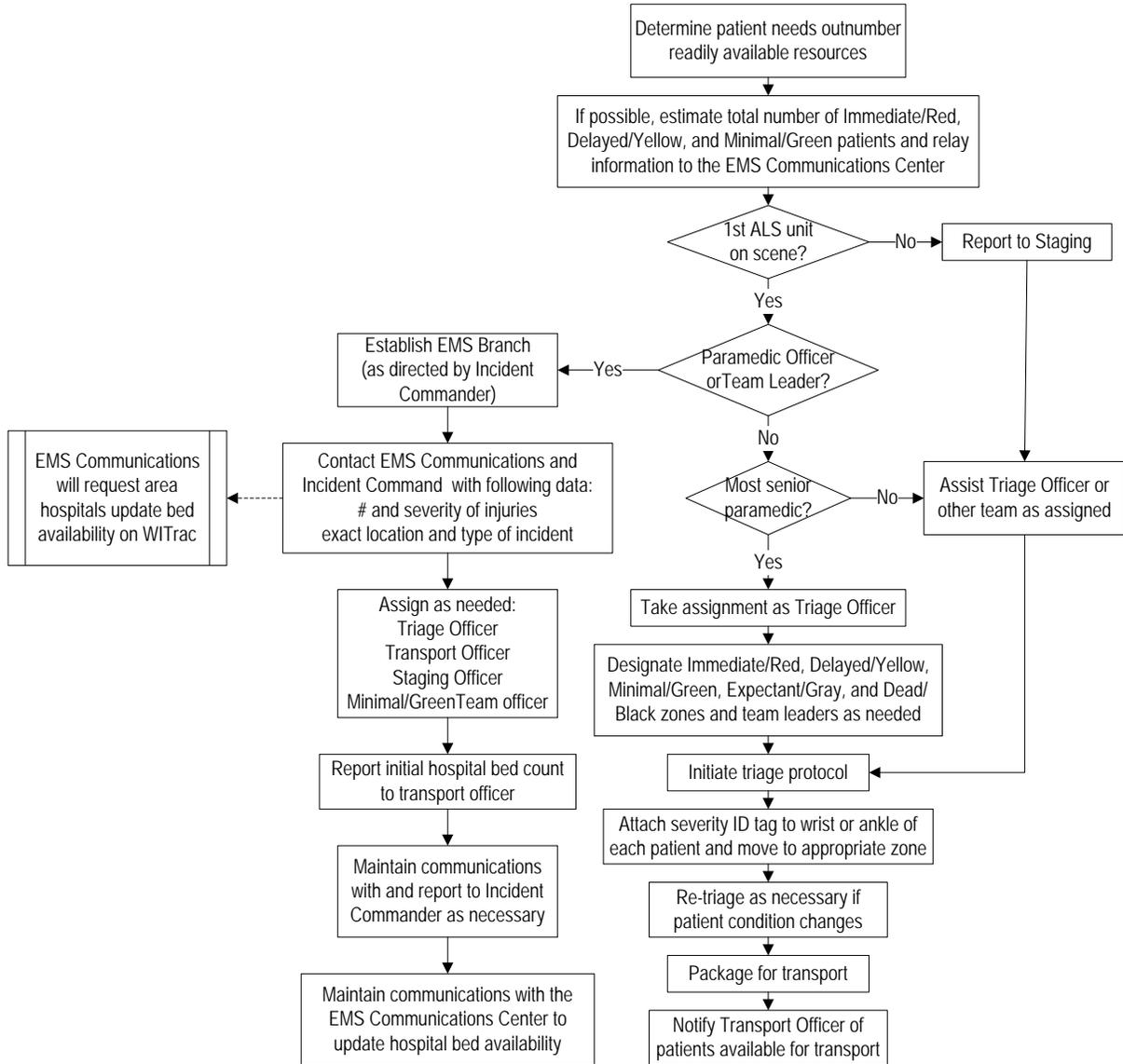
A patient care record will be completed for all deceased patients. Documentation will include:

- Pertinent information regarding patient's known medical history.
- Treatment provided; if no treatment was provided, the reason for not initiating a resuscitation attempt.
- The time of determination not to initiate resuscitative measures, or the time CPR was discontinued

A copy of the patient care record is to be forwarded to the Medical Examiner's Office.



**Universal Care:
MASS CASUALTY TRIAGE
Practice Guideline**



NOTES:

- Utilization order of EMS resources is:
 - Local EMS agency and mutual aid units (including air ambulances)
 - Zone resources (MABAS)
 - Activation of Milwaukee County Disaster Plan (Annex H-3) may be requested by Incident Commander through Milwaukee County Emergency Management
- Refer to individual fire department disaster/multi-casualty incident position descriptions for further specific duties.
- Refer to the S.A.L.T. Triage standard of care for patient assessment.
- BLS transport units should use MCI ambulance to hospital communication protocol.
- EMS units should report back to staging after transport until released by the Incident Commander.



**Universal Care:
MEDICATION CROSS CHECK
Practice Guideline**

ADAPTED WITH PERMISSION FROM WICHITA-SEDGWICK COUNTY EMS SYSTEM

The MACC must be completed prior to the administration of any medication.

If a discrepancy, disagreement, or need for clarification is encountered at any step in the process, it MUST be resolved prior to continuing the cross-check.

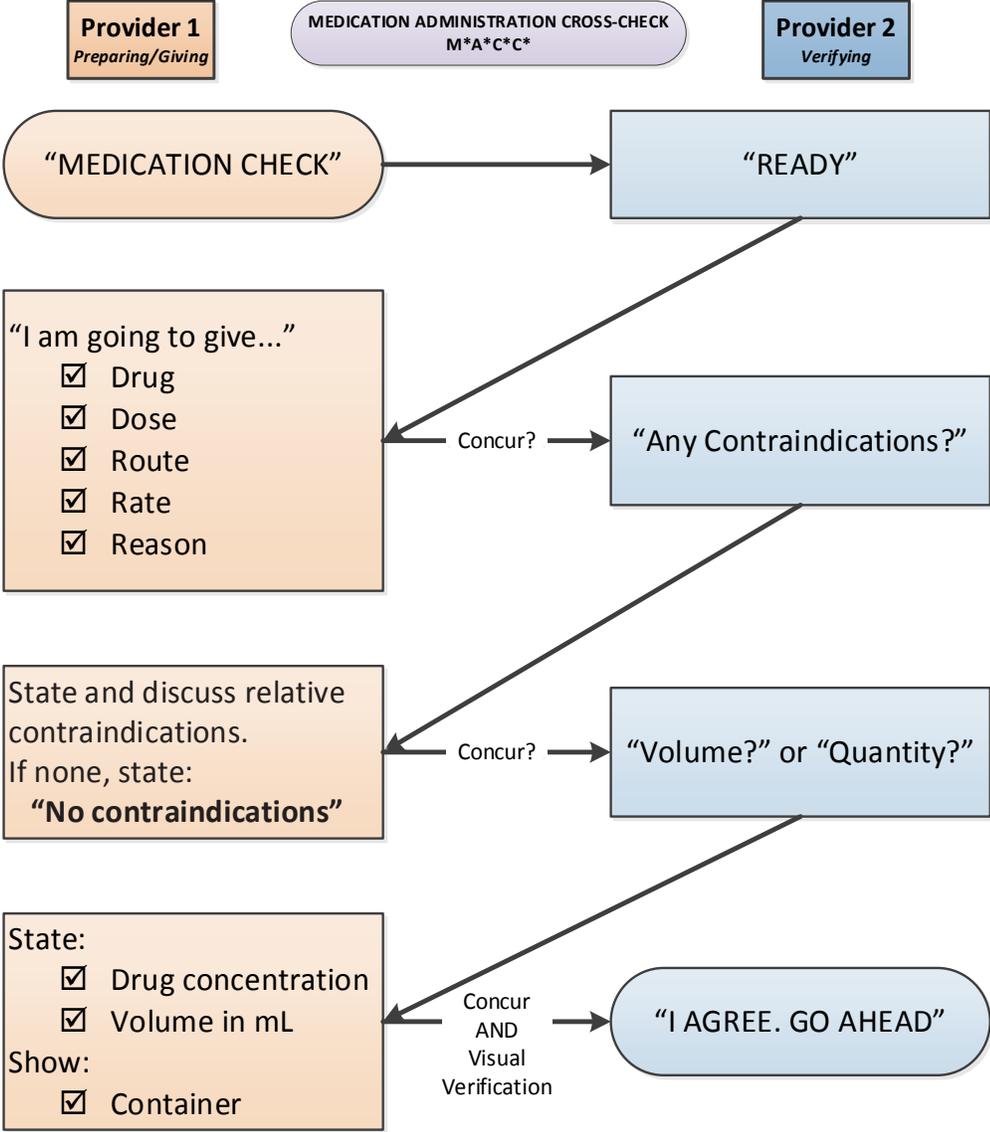
If there is an interruption or change in patient condition of any kind, the process must be re-initiated by Provider 1.

Contraindications include:

- ❖ Expiration date
- ❖ Known patient allergies
- ❖ Verification of appropriate vital signs

Avoid ambiguous statements of confirmations like 'okay.'

Essentially only Provider 2 can authorize the administration of the medication.



RED RULE of Medication Administration
(A Duty to Avoid Causing UNJUSTIFIABLE Harm)
NEVER give the contents of a syringe that is not labeled or without visualizing the vial or ampule from which it was immediately drawn

Initiated: 03/01/2018
 Reviewed/Revised:
 Revision

Approved: M. Riccardo Colella, DO, MPH, FACEP
 Approved: EMS Division Director Kenneth Sternig, RN

Pg 1 of 1



**Universal Care:
NARRATIVE DOCUMENTATION FOR PCR
Operational Policy**

POLICY: The patient care record narrative will provide a complete picture of the patient presentation, pertinent findings, pertinent negatives, ongoing development of the patient care event, care and treatment provided and condition at end of call.

GUIDELINES: The intent of writing a narrative documentation is to tell a story that can be completely understood by people who were not present at the scene. Narrative documentation should provide a, clear and concise, yet thorough explanation of what occurred at the scene of the call. Document an unbiased and factual description of the call. Make sure all check boxes or electronic screen choices match documentation made in the narrative section of the PCR. Use a systematic approach, a good PCR should be written with the same systematic approach that is used for the patient assessment. Include critical information and document care chronologically.

Sample guideline for Narrative Documentation:

1. Found (age & sex of patient) in (position) complaining of _____.
2. Since (duration).
3. States chief complaint began (time).
4. Precipitating factors
5. List interventions by patient/family & results
6. Describe signs & symptoms and assessments which are not mentioned previously in record.
7. Describe treatments not already mentioned in record: patient treated with _____ or treated as above.
8. List responses to treatments if not already mentioned.
9. Document any reassessments done besides initial assessment.
10. List any problems which may have occurred as a result of your interventions.
11. Patient transported in (position) to what hospital and with/without lights/siren, if not already mentioned.
12. List status of patient during transport.
13. Document status of patient upon admission to emergency department. Include comments of any "significant findings" which the patient was treated for, ex: Upon admission to ED, patient _____.
14. **After narrative is written it – READ IT. Check for accuracy AND consistency.**

A narrative in conjunction with other data fields in the PCR should clearly provide the patient assessment information below:

Guidelines for Assessment/Interview:

1. Name:
2. Age:
3. Chief Complaint:
4. Onset/Duration:
5. Precipitating Factors:
6. Interventions by Patient:
7. Associated Symptoms:
8. Medical History:
9. Allergies/what kind:
10. Vital Signs - Blood Pressure, Pulse and Respirations:
11. Breath Sounds:
12. Pupils:
13. Skin:
14. Neck Veins:
15. Mental status:
16. Initial Physical Exam:
17. Decide on what Primary Impression is and how the patient will be treated.



**Universal Care:
NEW PRODUCT EVALUATION
Operational Policy**

This guideline is intended to provide EMS personnel of the Milwaukee County EMS System with a mechanism for objective evaluation of contemporary EMS equipment proposed for addition to the inventory of the paramedic unit:

Only two (2) product evaluations may be in progress at a given time.

Every attempt will be made for product evaluation to rotate through all paramedic units on a cyclical basis.

Whenever possible there will be at least one (1) suburban paramedic unit and one (1) Milwaukee paramedic unit evaluating a product for each evaluation period.

Paramedic units will have the proposed equipment for at least one calendar month to evaluate the product.

The product being evaluated should not replace an existing item on the ambulance. If a problem arises, the previous existing item should be immediately available.

Each shift of paramedics will complete the short evaluation form at the end of the evaluation period.

At the end of the evaluation period, the paramedic units will return the product and evaluation forms to the OEM-EMS Division.

The units involved will make every effort to safeguard the item being evaluated.

The results of the evaluation will be reported to all personnel at the next regularly scheduled Continuing Education Conference.

If a paramedic unit would like a product evaluated, a Request of Product Review will be submitted to Milwaukee County EMS.

The paramedic unit requesting the product evaluation should be one of the units participating in the evaluation.



POLICY:

Milwaukee County EMS Advanced Life Support providers will establish on-line medical control whenever:

- Directed by the MCEMS Standards and Practice (S&P) Manual
- Special circumstances not specifically outlined in the S&P manual arise, requiring emergent medical advice, opinion, or orders
- Deteriorating patient conditions do not improve with protocols

Circumstances may arise where there is an inability to carry out an OLMC order, 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 the protocol:

- The prehospital provider must immediately notify the consulting physician why the order cannot be carried out
- The prehospital provider must initiate the MCEMS Quality Assurance process as soon as practical following the call (same shift) by calling the EMS Incident Line at (414) 257-6660.

Circumstances may arise where the OLMC physician provides orders for extraordinary care. In rare cases, a physician providing on-line medical consultation may direct a prehospital provider to render care that is truly life-saving, not explicitly listed within the protocols, but within the Wisconsin EMS Scope of Practice guidelines for the provider's level of EMS licensure:

- During the consultation, the physician and prehospital provider must acknowledge and agree that the patient's condition and extraordinary care are not addressed elsewhere within these medical protocols and the order is absolutely necessary to maintain the life of the patient.
- The prehospital provider must feel capable of correctly performing the care directed by the consulting physician, based on the instructions given by the consulting physician.
- The prehospital provider must inform the consulting physician of the effect of the treatment and notify the receiving physician of the treatment upon arrival at the hospital.
- The prehospital provider must initiate the MCEMS Quality Assurance process as soon as practical following the call (same shift) by calling the EMS Incident Line at (414) 257-6660.

Circumstances may arise where the prehospital provider may not be able to contact an OLMC physician because of a radio or other communication failure:

- The prehospital provider must attempt to contact the MCEMS EMSCOM center by direct telephone.
- The prehospital provider must provide care as outlined in the S&P manual.
- The prehospital provider must not provide care exceeding the training certification or scope of care of the EMS provider as outlined by the MCEMS Operational Plan or State of Wisconsin EMS guidelines.

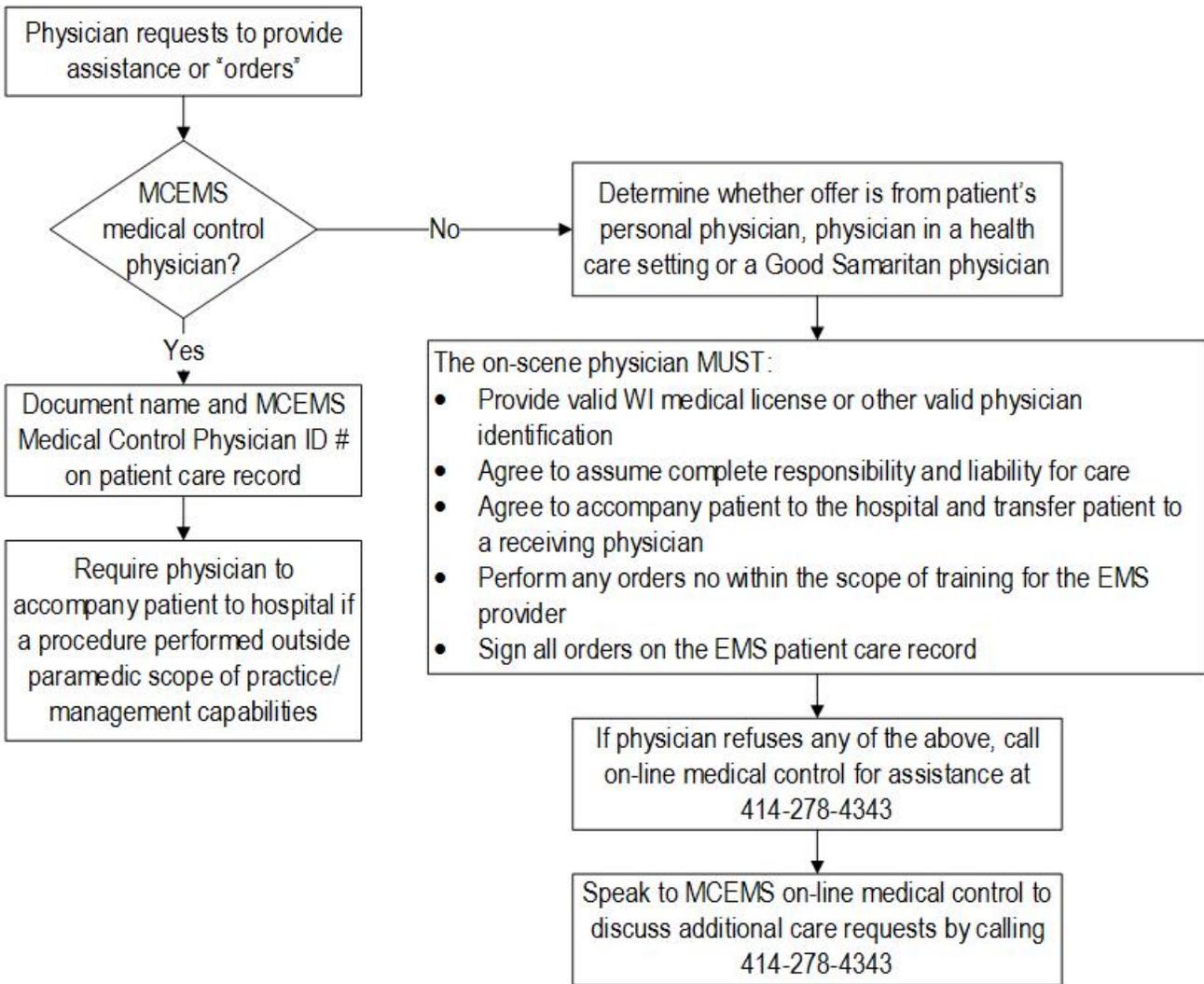
Care under exceptional circumstances (mass casualty or other disaster) will be addressed in a separate policy/guideline.



**Universal Care:
ON-SCENE PHYSICIAN
Operational Policy**

POLICY:

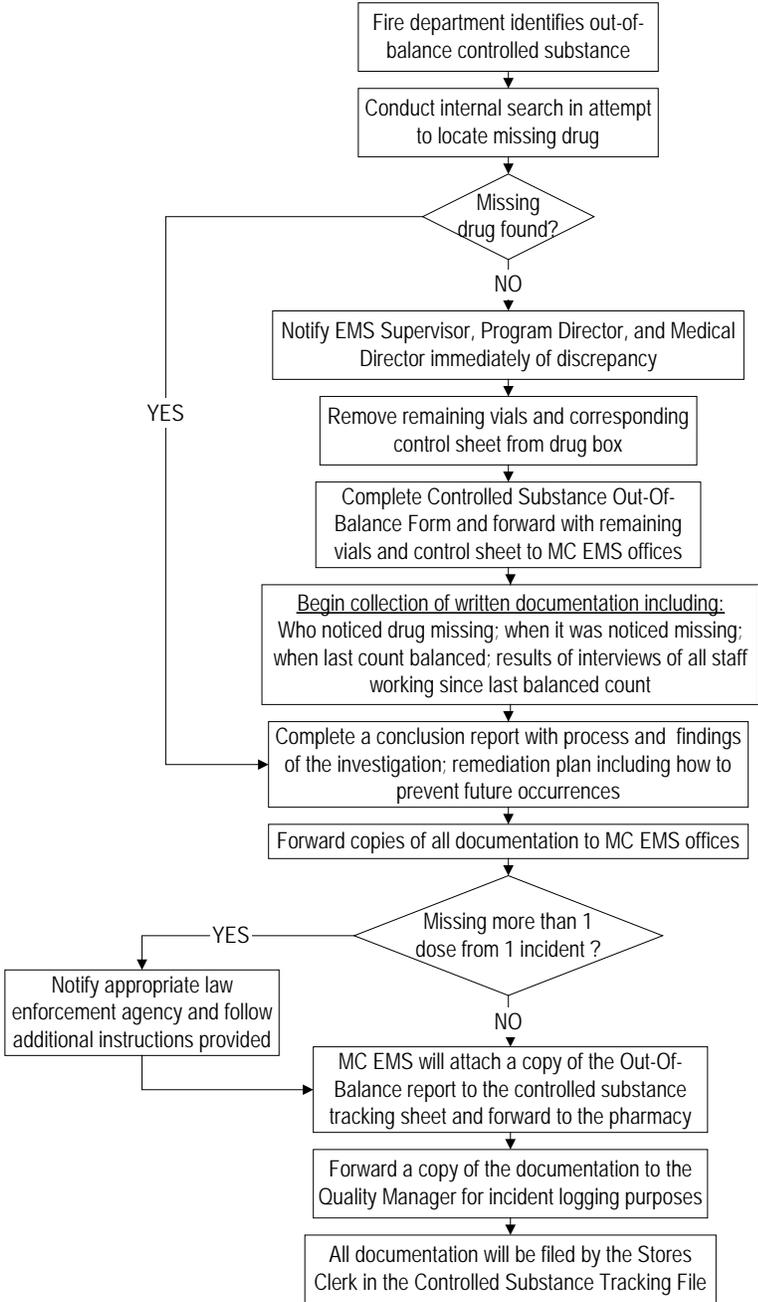
- EMS providers may only provide care within their approved scope of practice regardless of an on-scene physician directive; care beyond scope of practice must be performed by the physician.
- Telephone directives from a personal physician are not valid. The physician is welcome to call EMSCOM and speak to an on-line medical control physician.
- A valid Wisconsin State approved DNR or POLST form may be followed provided it is within the scope of practice for the EMS provider.





**Universal Care:
OUT-OF-BALANCE CONTROLLED SUBSTANCES:
Operational Policy**

POLICY: Milwaukee County EMS is responsible for maintaining accountability and will document any and all discrepancies in tracking controlled substances.



NOTE:

- The Medical Director or Program Director may request reporting to the appropriate law enforcement agency.



**Universal Care:
OUTSIDE EMS STUDENT PARTICIPATION:
Operational Policy**

Purpose:

- ◆ To standardize the mechanism by which individuals from EMS systems outside Milwaukee County can request clinical experience within the Milwaukee County EMS System
- ◆ To define the procedure for in-field observation by eligible parties

Eligibility: (any of the following)

- Employees/members in good standing with a licensed Ambulance Service Provider who delivers Advanced Life Support prehospital care within a State or regional approved plan in a political subdivision outside Milwaukee County. *Applications are accepted only from a state licensed EMS Provider or state certified EMS Education Center on behalf of the individual (individuals may not independently apply for training).*
 - ◆ Licensed physicians and medical students involved in emergency medical care and/or medical control.
 - ◆ Other medical professionals, including but not necessarily limited to registered nurses and physician assistants, who have an active role in the delivery of emergency medical care.
 - ◆ Individuals engaged in current research in emergency medical care.

Experiences available:

- ◆ Initial instruction (didactic and clinical experience) for Emergency Medical Technician--Paramedic or --Advanced
- ◆ Refresher (continuing education) course for licensed paramedics
- ◆ Customized educational programs with content developed as requested by the employing agency
- ◆ Supervised field experience with operational EMS unit
- ◆ Ride-along (non-participatory) with operational EMS unit

Prerequisites:

- ◆ Approval by the Milwaukee County EMS System Program and/or Medical Directors.
- ◆ Valid Wisconsin license or training permit as EMT-B, EMT-A, or EMT-P for participatory experiences.
- ◆ Contractual agreement between parent organization and Milwaukee County for participatory experience.
- ◆ Transfer of Medical Control to Milwaukee County System for the duration of the participatory experience.
- ◆ Signed waivers from parent organization and participants.
- ◆ Release of academic information waivers from participants for educational programs.
- ◆ Proof of injury and liability insurance (Worker's Compensation and malpractice).
- ◆ Agreement that non-instructional expenses (i.e., books, personal educational materials, travel, lodging and meal costs) are the responsibility of the participant/parent organization.
- ◆ Proof of meeting clinical sites' communicable disease requirements.

Application process for participatory experiences

- ◆ Written request for experience sent to the Milwaukee County EMS System Program Director by authorized administrative officer of parent organization.



**Universal Care:
OUTSIDE EMS STUDENT PARTICIPATION:
Operational Policy**

- ◆ Agreement on the terms of the experience, including:
 - ◆ Dates and times of the experience
 - ◆ Type of experience (didactic, clinical, field)
 - ◆ Cost to the parent organization. Milwaukee County Statutes require that outside educational offerings must be financially self-supporting.
 - ◆ Development of appropriate objectives and content of the experience.
 - ◆ Agreement of participation from the Chief of the hosting Milwaukee County Fire Department, including any costs to the Education Center/student.
 - ◆ Signed contract returned to Milwaukee County EMS Program Director.
 - ◆ Receipt of documentation of prerequisites.

Educational sessions

- ◆ Assignment of appropriate instructors and support personnel.
- ◆ Orientation of the participant(s), including baseline evaluation as needed (e.g. pretest, IV skill station, etc.). Cost of any orientation session must be included in the original negotiated price with the employing department.
- ◆ Presentation of the content.
- ◆ Evaluation of the participant(s).
- ◆ Evaluation/feedback by the participant(s) of the presentation.

Completion of the educational session

- ◆ Notification of completion sent to the parent organization.
- ◆ Submission of student evaluations to the parent organization.
- ◆ Final bill forwarded to the parent organization.
- ◆ Receipt and deposit of tuition payment.

Ride-along observations:

- ◆ Individuals who wish to ride with operational paramedic units on an observation-only (non-participatory) basis should submit a request to the Program Director of the Milwaukee County EMS System.
- ◆ Ride-along observations are for educational purposes only. Applicants should state clearly in their request the objectives of their experience.
- ◆ Ride-along observations by students from a course charging tuition will be assessed a fee, proportional to the total hours of the course. The actual fee will be negotiated (prior to the start of the experience) by the Program Director or his/her designee.
- ◆ Permission must be granted by the Chief of the hosting Fire Department.
- ◆ All requirements of the hosting fire department must be met:
 - ◆ Proof of Worker's Compensation and liability insurance.
 - ◆ Signed waivers from the individual and his/her employer.
- ◆ Date, time and unit assignments are coordinated through the Milwaukee County EMS Education Center. Priorities are assigned based on the educational need(s) of the observer and the constraints of the EMS system.



**Universal Care:
PARAMEDIC FULL PRACTICE ACHIEVEMENT
Operational Policy**

An intern must serve a minimum of 6 months on an ALS transport unit to be eligible for Full Practice Status. At 5 months, the intern paramedic report will be created to give the Fire Department and OEM an overview of the intern's status and performance within the system.

Meaningful Evaluations:

- Detailed comments to include:
 - Types of runs
 - Performance as Team Lead
 - Strengths/Weaknesses
 - Goals for next shift
 - Equipment competency
 - Documentation

Individual vs. System Performance Report

- Call Types
- Skills Performance
- Run Volume

Quality Assurance:

- Protocol Deviations
- Kudos/Complaints
- High Profile / High Risk Run

FD Recommended Action Plan

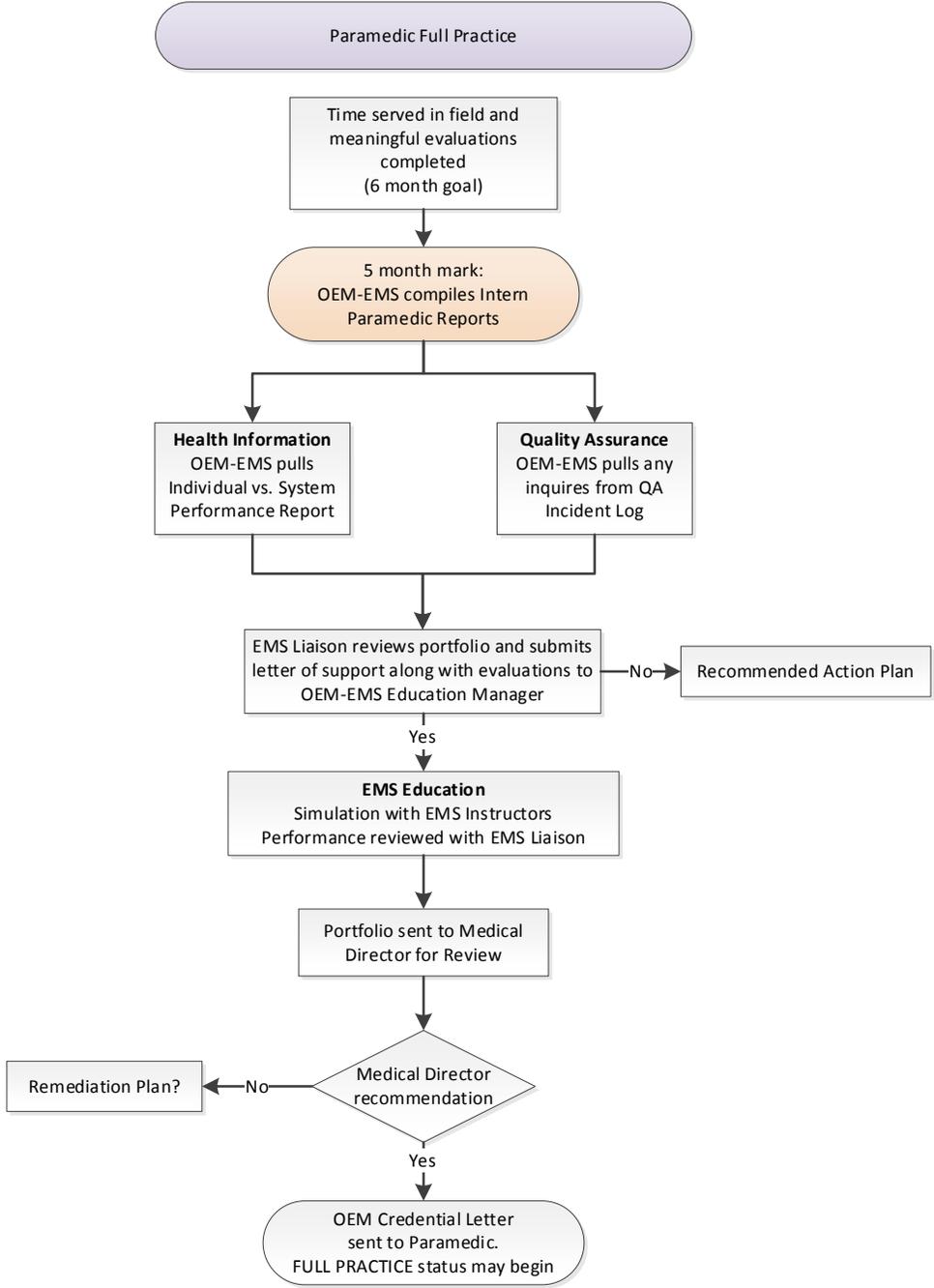
- Suggestions to make intern successful

Simulation:

- Intern must act as Team Lead:
 - Hands on assessment
 - Develop working assessment
 - Directs all team members
 - Develop treatment plan
 - Perform treatment interventions
 - Provide radio report
 - Choose appropriate destination
 - Provide hand off report
- Intern Paramedic Report drives simulation type
- May use any reference material normally available

Portfolio:

- Evaluations
- System Performance Report
- Attestation Letter
- Simulation Performance





**Universal Care:
PARAMEDIC INTERN ONBOARDING
Operational Policy**

Initial onboarding request may be emailed from FD Admin to OEM EMS Education manager

Onboarding Files:

1. All necessary documents
2. Competency evaluations
3. Attestation letter(s) from EMS liaison
4. Competency evaluation
5. Medical Dir recommendation

Intern Target Solutions Assignments

- Protocols
- Last CE review
- Recent OEM Numbered Notices

Competency Evaluations:

- Scenario Simulation
- Protocol Review Exam
- Medical Director Interview

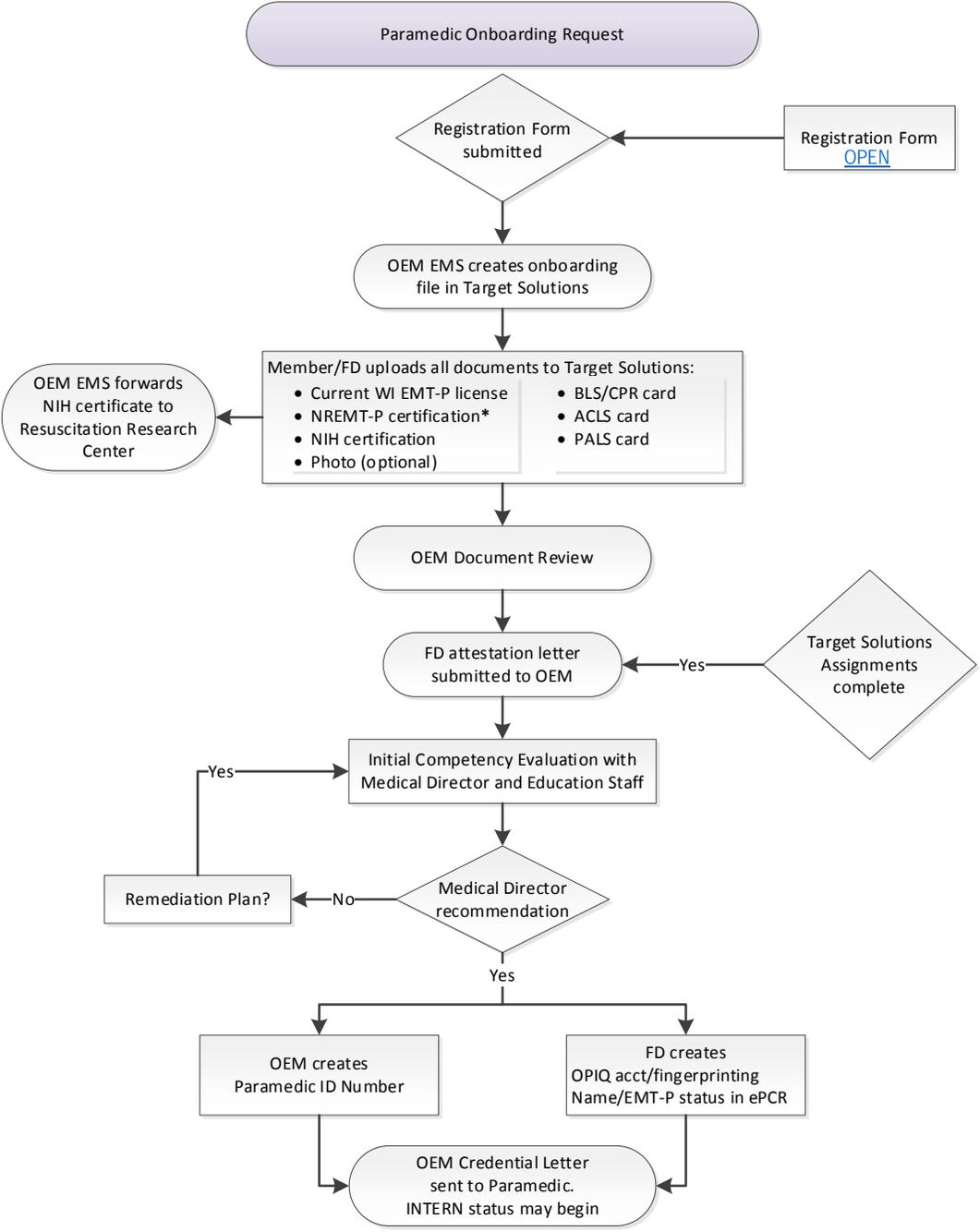
FD Responsibility

- Initiate onboarding request
- Submit registration form
- Review & readiness for evaluation
- Schedule evaluation
- Attestation letter(s)
 - FD member in good standing
 - Positioned to succeed
 - Studied, trained, prepared
 - FD supports member
- Facilitates remediation plan
- Confirm intern status in ePCR
- OPIQ account/fingerprinting

OEM:

- Creates TS account and files
- Confirms all documents in TS folder
- Notifies RRC
- Confirms TS assignment completion
- Notifies Medical Director of onboarding request
- Confirms evaluation scheduling
- Completes evaluation results
- Assists with remediation plan
- Completes affiliation in e-licensing
- Creates paramedic number
- Mails credential letter confirming Intern Paramedic Status

***NOTE: Applicants must obtain NREMT-Paramedic certification within 6 months of establishing OEM-EMS Paramedic Intern status.**

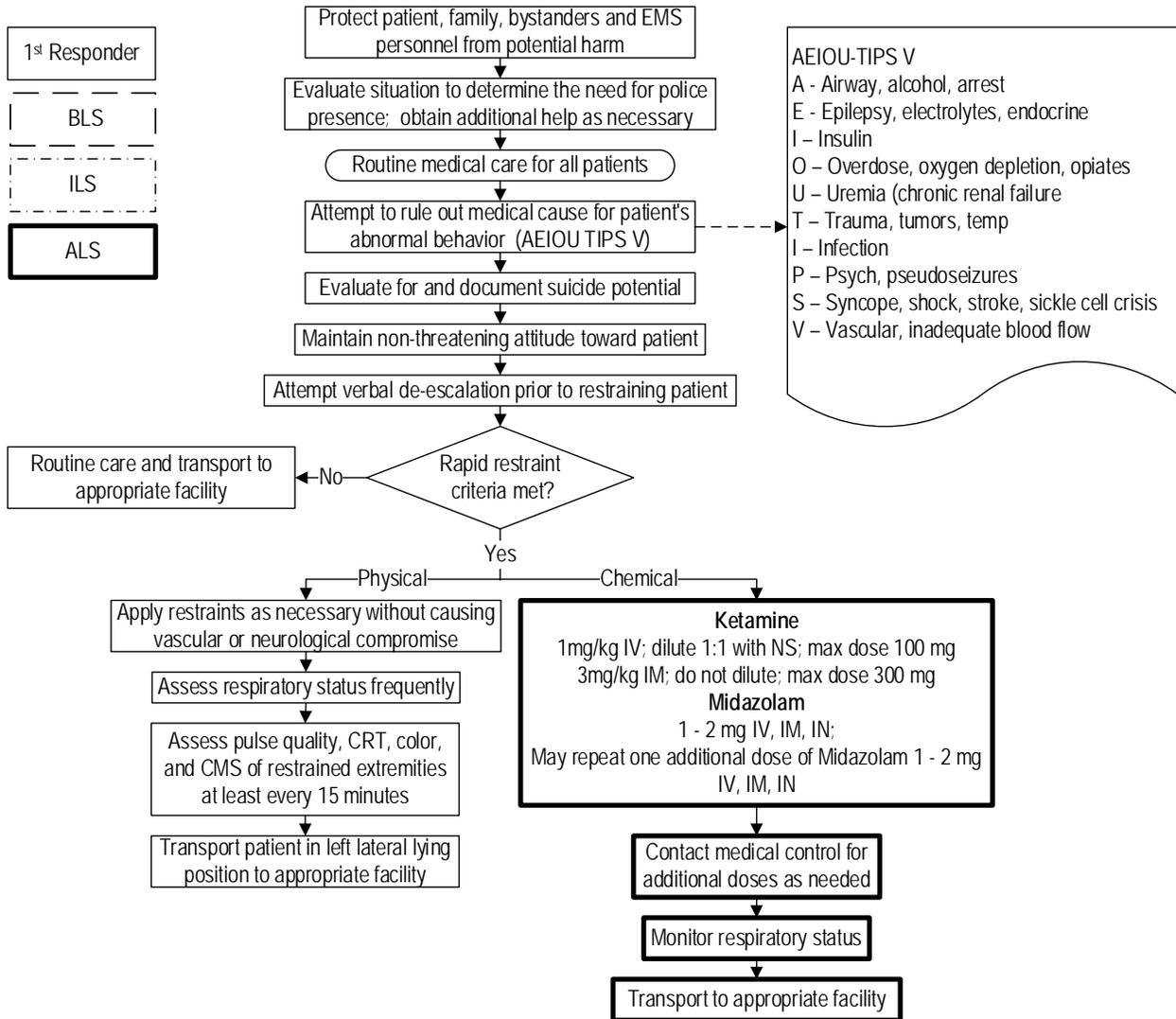




**Universal Care:
PATIENT RESTRAINT:
Medical Protocol**

POLICY: Prior to the application of restraints – physical and/or chemical - a patient must meet the following criteria:

- Excited delirium/agitation
- Immediate threat of harm to self or others





NOTES:

- Intranasal administration of Ketamine is not an option
- Use the least restrictive or invasive method of restraint necessary
- Chemical restraint may be less restrictive and more appropriate than physical restraint in some situations
- Documentation of need for restraint must include:
 - Description of the circumstances/behavior which precipitated the use of restraint
 - A statement indicating that patient/significant others were informed of the reasons for the restraint and that its use was for the safety of the patient/bystanders
 - A statement that no other less restrictive measures were appropriate and/or successful
 - The time of application of the physical restraint device
 - The position in which the patient was restrained and transported
 - The type of restraint used
- Physical restraint equipment applied by EMS personnel must be padded, soft, allow for quick release, and may not interfere with necessary medical treatment
- Spider and 9-foot straps may be used to restrain a patient in addition to the padded soft restraints.
- Restrained patients may NOT be transported in the prone position
- EMS providers may NOT use:
 - Hard plastic ties or any restraint device which requires a key to remove
 - Backboard or scoop stretcher to "sandwich" the patient
 - Restraints that secure the patient's hands and feet behind the back ("hog-tie")
 - Restraints that interfere with assessment of the patient's airway.
- For physical restraint devices applied by law enforcement officers:
 - The restraints and position must provide sufficient slack in the device to allow the patient to straighten the abdomen and chest to take full tidal volume.
 - Restraint devices may not interfere with patient care.
 - An officer must be present with the patient AT ALL TIMES at the scene as well as in the patient compartment of the transport vehicle during transport
- Side effects of Midazolam may include respiratory depression, apnea, and hypotension.
- Side effects of Ketamine may include excessive salivation, hypertension, tachycardia, hallucination



**Universal Care:
POLICE BODY WORN CAMERA / VIDEO RECORDING
Operational Policy**

PURPOSE: Body-worn cameras (BWC) will be used by the Milwaukee Police Department and the Milwaukee County Sheriff's Office beginning September 2015. Additional law enforcement agencies will likely add these devices in the future. They are used to assist Officers in the performance of their duties by providing an accurate and unbiased recording of interactions between police members and the public.

INFORMATIONAL: During the course of activation, these recordings may also capture EMS patient activities. The recordings are owned by the law enforcement agency and therefore are subject to the Wisconsin Open Records Law. Law enforcement agencies are not considered covered entities under HIPAA or covered by Wisconsin patient health care confidentiality laws. Milwaukee County Corporation Counsel's opinion was requested concerning EMS rights and police body-worn cameras. Their opinion is outlined below.

1. EMS may not impede law enforcement duties by activation of BWC by citing HIPAA or other concerns.
2. By necessity, confidentiality issues must be addressed after the fact for those occurrences.
3. Where a patient is receiving medical care and does not pose a likelihood of immediate law enforcement intervention, EMS could request that the officer de-activate the BWC. However, this is dependent upon the severity of patient's medical condition and the officer's judgement of whether circumstances merit activation of the BWC, including the potential that the person may abscond.
4. If the patient is in custody and being investigated, EMS cannot and should not intervene in law enforcement duties regarding activation of the BWC.
5. Both MPD and MC Sheriff's Office have policies in place to address privacy issues. MPD states BWC's will not be activated "in a place where a reasonable expectation of privacy exists..." and accidental recording may be deleted before the retention period expires at the Chief's discretion. The MC Sheriff's Office policy contains a provision for deletion requests as well.

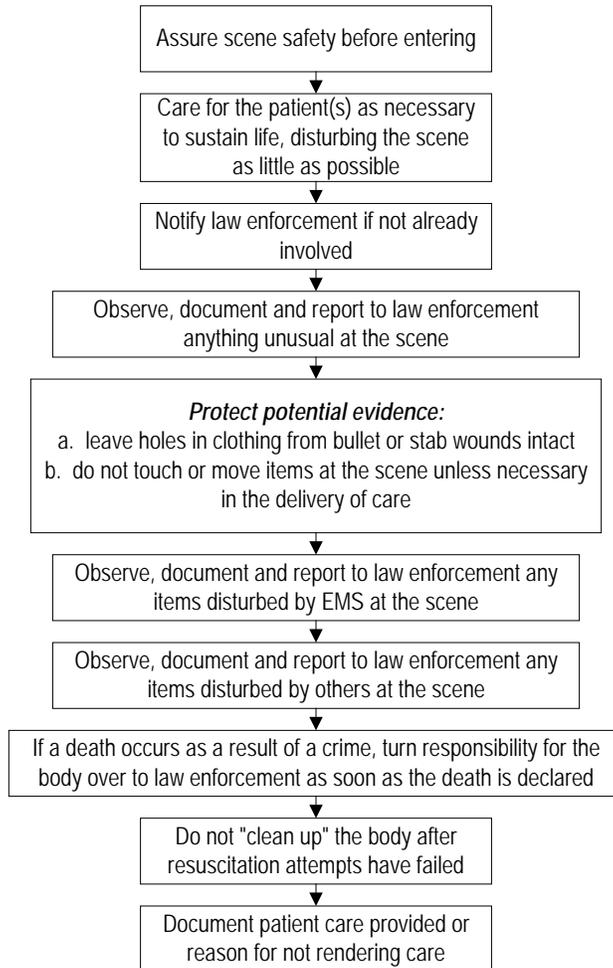
RECOMMENDATIONS:

1. Perform EMS business as usual.
2. Apply safety precautions first.
3. Protect the patient's privacy, if able. Currently if sensitive patient healthcare issues need to be discussed, EMS may ask the Officer to step away for privacy. Continue to do so, however, the Officer always has the discretion to comply or not.
4. Any EMS event may potentially be recorded by the public as well, necessitating professionalism at all times.
5. Quality documentation is more important than ever in caring for your patient as well as protecting yourself.



**Universal Care:
POTENTIAL CRIME SCENE
Operational Policy**

POLICY: A potential crime scene is defined as a location where any part of a criminal act occurred, where evidence relating to a crime may be found, or suspicions that a criminal act may have occurred.



NOTES:

- Cooperate with police for information gathering at scene, such as:
 - Disruption of scene by EMS personnel or others
 - Names of responding EMS personnel
 - Medical care provided to the patient
- All documentation is to be noted in objective terms
- Patient's or bystanders' statements are to be put in quotes
- Avoid documentation not relevant to patient care
- The patient care record is a legal document and will be used in court
- The patient care record is confidential and protected by state statutes



**Universal Care:
PRACTICE STATUS & PRIVILEGES
Operational Policy**

Policy: All EMS patient care providers receiving medical oversight by and contracted to operate in the Milwaukee County EMS system must request and be granted practice status and privileges by the Milwaukee County EMS Medical Director.

I. Minimum qualifications

- A. Be an active member in good standing of an agency under contract to provide EMS services
 - 1. Candidates may not have a current or pending disciplinary action or suspension
 - 2. Candidates are required to sign waivers permitting the EMS Medical Director to review employment and disciplinary files
 - 3. Provide verification of an acceptable Caregiver's Background check
 - 4. Provide documentation of the lack of potentially communicable disease (i.e. up to date recommended immunizations; see new student policy)
- B. Have a current State of Wisconsin EMT-P, EMT-A, or EMT-B license and meet all applicable State rules and regulations.
- C. After September 1, 2010, all Paramedics new to the system must have and maintain NREMT certification.
- D. ALS providers must present a certification of completion for the Human Participants Protection Education for Research Teams online course, sponsored by the National Institutes of Health.

II. Minimum competency

- A. Clinical Evaluation
 - 1. Produce documentation that meets or exceeds Milwaukee County EMS Education Center level-appropriate course work and skill competencies
 - 2. Successfully complete an ALS content evaluation by a member of the Milwaukee County EMS Education Center faculty.
 - 3. Demonstrate competent level-appropriate, scope of practice during observation by a member of the Milwaukee County EMS Education Center
- B. Demonstrate competent level-appropriate EMS patient care knowledge and safe patient management during a verbal examination by the Milwaukee County EMS Medical Director

Graduation from the Milwaukee County EMS Education Center satisfies all minimum qualifications and competencies

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III. Minimum competency

- A. Clinical Evaluation
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- B. Demonstrate competent level-appropriate EMS patient care knowledge and safe patient management during a verbal examination by the Milwaukee County EMS Medical Director

Graduation from the Milwaukee County EMS Education Center satisfies all minimum qualifications and competencies.

FOR THE FULL PRACTICE EMS PROVIDER

The full-practice EMS provider is defined as: An EMS provider who routinely provides patient care in the Milwaukee County System. An example of full-practice is the full-time municipal fire department paramedic.

Full Practice ALS Providers

- Demonstrate skill proficiency by meeting or exceeding yearly psychomotor skills competencies established by the Medical Director. Individuals with inadequate experience opportunities to maintain skill proficiency (as determined by the Medical Director) may be required to obtain additional educational experience in a manner prescribed by the Medical Director.
- While assigned to an active paramedic unit, all paramedics must rotate through all patient care assignments on a regular basis, spending an equivalent amount of time in each position. Assignment to the positions is designated by Fire Department administration and monitored by Milwaukee County EMS.

Non-practicing ALS Providers

The non-practicing paramedic is defined as: A paramedic who does not provide ALS care in the Milwaukee County EMS system but whose work contributes directly to the benefit of the system. An example of a special reserve paramedic is one who has attained a supervisory or administrative position. The Non-practicing Paramedic:

- Must have attained at least 2 years of full-practice status or its equivalent.
- Receives prior authorization from the medical director prior to providing ALS care.



Intern ALS, EMT-A, and EMT-B Providers

The Intern EMS Provider is defined as: A provider who has not previously had full practice status in the Milwaukee County EMS system. Examples would be new Milwaukee County EMS Education Center graduates and transfer paramedics, regardless of years of experience. "Transfer EMS provider" is defined as any individual whose initial training did not occur at the Milwaukee County EMS Education Center.

An ALS provider will be referred to as an "Intern Paramedic" until he or she has met both of the following criteria:

- Completed 12 months with a minimum of 2400 shift work hours on a transporting MED Unit **AND**
- Achieved 50% of the 2-year skill and performance benchmarks.

The Intern Paramedic may only provide ALS patient care if accompanied by a full-practice paramedic.

An EMT-Advanced provider will be considered an intern until performance benchmarks are achieved.

An EMT-Basis provider will be considered an intern until successfully completing their probationary period with the employing EMS agency.

FOR THE GRADUATE PARAMEDIC

A Graduate Paramedic is defined as: An individual who has successfully completed a paramedic education course, has taken the NREMT-P certification examination, and is awaiting the results of the examination.

A graduate paramedic has privileges consistent with a paramedic student. The Graduate Paramedic may perform ALS procedures when accompanied by two licensed paramedics, one of whom must have full practice privileges **AND** at least two years of experience.



INTERRUPTED OR CHANGE IN PRACTICE PRIVILEGE

Any interruption or change in work schedule that may affect a paramedic's practice status must be reported immediately to the Program Director of Milwaukee County EMS. Examples include but are not limited to: injury, illness, family leave, retirement, or change of employer.

Paramedics who have not been active within their classification for a period of more than 90 calendar days must contact the Education Manager at the Milwaukee County EMS Education Center prior to returning to patient care duties to evaluate content EMS provider may have missed and to discuss meeting to remediate on missed content/ new policies/new equipment etc..

Paramedics who have not been active within their classification for more than 1 calendar year must successfully complete an ALS content evaluation including an infield observation by a member of the Milwaukee County EMS Education staff.

If the interruption from service was due to injury or illness, the paramedic must present documentation that he or she has been medically approved to return to active duty prior to any evaluation by Milwaukee County EMS.

REINSTATEMENT OF PRACTICE PRIVILEGE

Paramedics who have not been active on a paramedic unit for a period of more than ninety (90) calendar days must be re-evaluated by the Milwaukee County EMS Education Center. The medical director will determine the individual's status and practice privilege prior to reassignment to a paramedic unit. For individuals who have not been assigned to the paramedic unit secondary to illness or injury, the paramedic must also present documentation that he/she has been medically approved to return to active duty prior to any evaluation by Milwaukee County EMS.

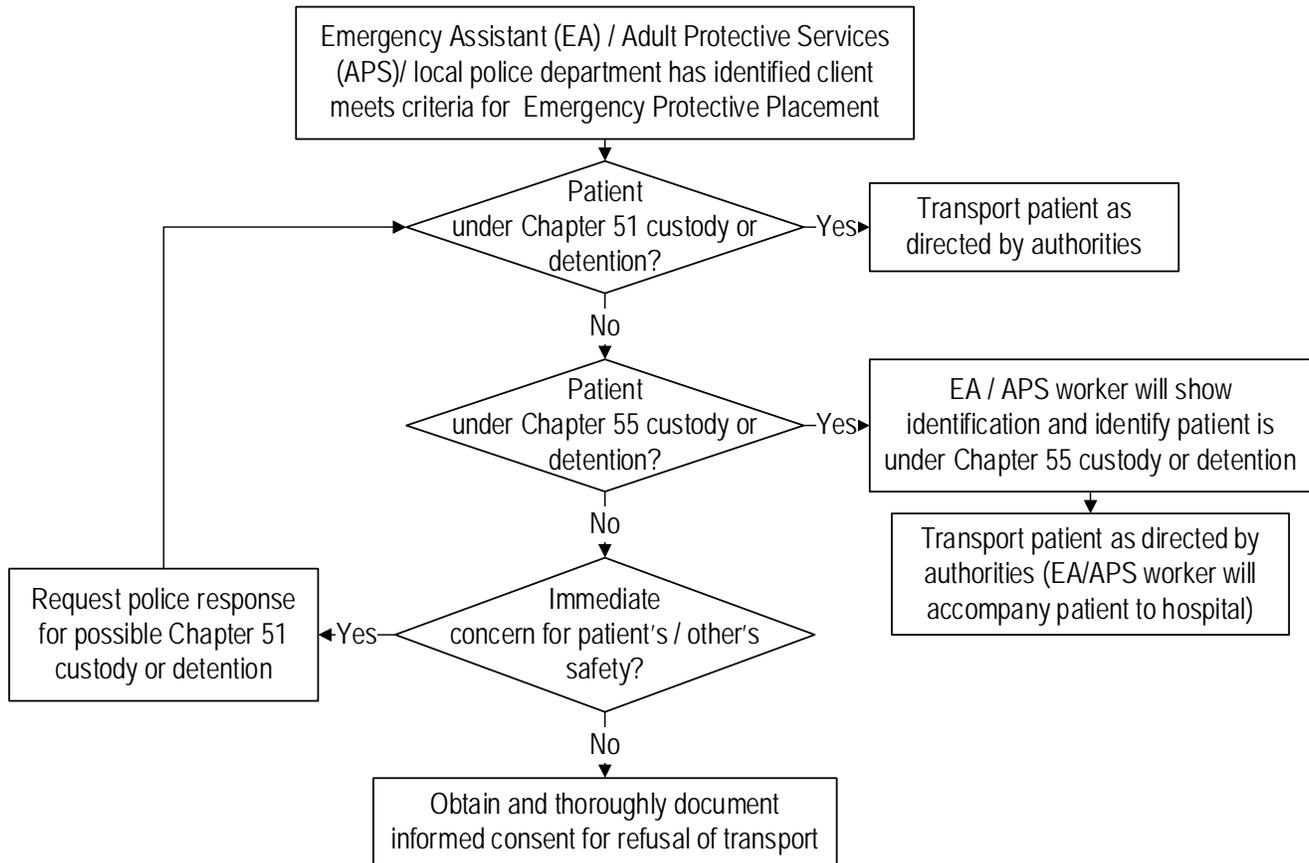
Paramedics who have not been active on a paramedic unit for a period of more than one (1) calendar year must successfully complete an ALS Content evaluation including an infield observation by a member of the Milwaukee County EMS Education staff and satisfy any State requirements regarding licensure prior to reassignment to a paramedic unit. For individuals who have not been assigned to the paramedic unit secondary to illness or injury, the paramedic must also present documentation that he/she has been medically approved to return to active duty prior to any evaluation by Milwaukee County EMS.

The medical director reserves the right to assign the practice privilege.



**Universal Care:
PROTECTIVE CUSTODY
Operational Policy**

- **WI Statute Chapter 51** (State alcohol, drug abuse, developmental disabilities and mental health act) provides legal procedures for voluntary and involuntary admission, treatment and rehabilitation of individuals (adults and minor children) afflicted with mental illness, developmental disability, drug dependency, or alcoholism.
- **WI Statute Chapter 55** (Protective services system) provides legal procedures for emergency protective placements if it is probable that an individual is incapable of providing for his or her own care or custody so as to create a substantial risk of physical harm to himself, herself or others if protective intervention is not immediately taken.
 - In Milwaukee County on an authorized Emergency Assistant (EA) or a Milwaukee County Adult Protective Services (APS) worker may detain the person at an appropriate facility and initiate an emergency protective placement.
 - Milwaukee County EA/APS will contact EMS or the local police department to transport as needed under authority of Chapter 55 Emergency Detention Process



Notes:

- For patients 60 years and older, contact Milwaukee County Department on Aging at **414-289-6874**
- For patients under 60 years of age, contact Milwaukee County Disability Services Division at **414-289-6660**



**Universal Care:
REFUSAL OF CARE OR TRANSPORT
Practice Guideline**

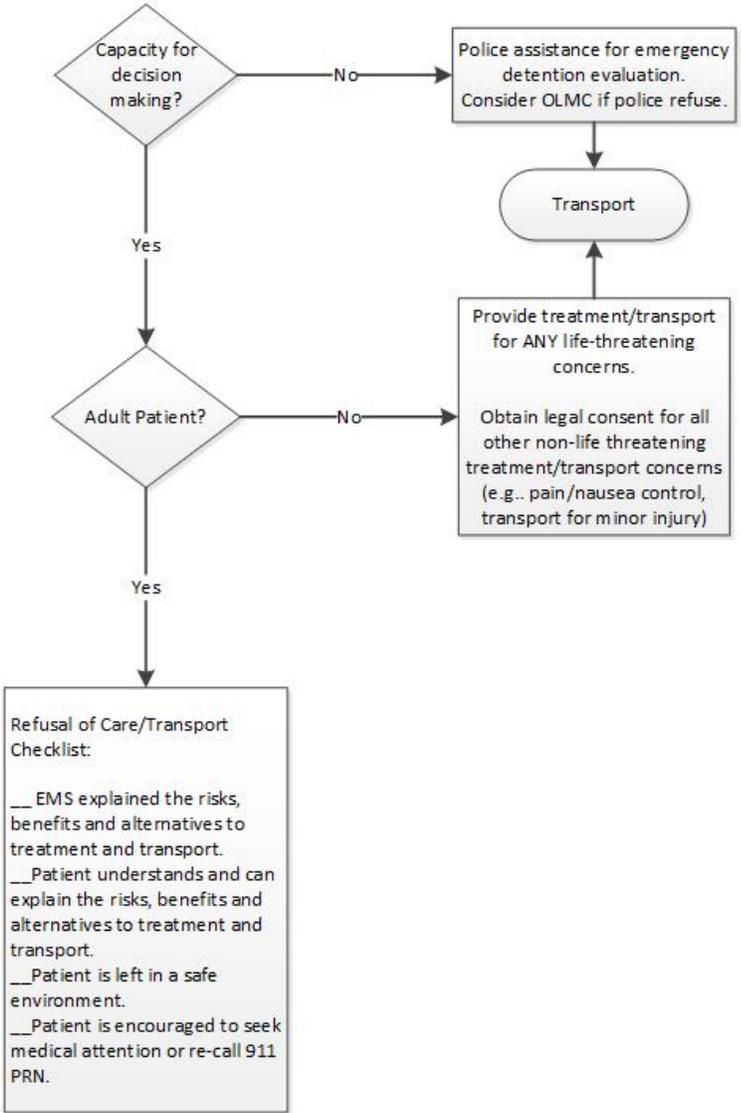
Patient Care Goals:
1. Protect patient autonomy while ensuring safety.

Patient Presentation:
Inclusion Criteria
Decision-Making Capacity:
An individual who is alert, oriented, and has the capacity to understand the circumstances surrounding his/her illness or impairment, as well as the possible risks associated with refusing treatment and/or transport, typically is considered to have decision-making capacity.
The individual's judgment must also not be significantly impaired by illness, injury or drugs/alcohol intoxication.
Individuals who have attempted suicide, verbalized suicidal intent, or have other factors that lead EMS providers to suspect suicidal intent, should not be regarded as having decision-making capacity and may not decline transport to a medical facility.

Adult Patient: For this guideline, someone who is 18. Emancipated minors can make decisions regarding their healthcare. An emancipated minor" means a minor who is or has been married; a minor who has previously given birth; or a minor who has been legally freed from the care, custody and control of her parents, with little likelihood of returning to the care, custody and control prior to marriage or prior to reaching the age of majority.

Quality Improvement:
Key Documentation Elements
1. Capacity for decision-making.
2. Elements of refusal/transport checklist are captured in documentation and signed by patient or their guardian.

Patient Safety Considerations:
EMS should not be endangered by attempting to treat/transport an individual who refuses care; ensure police, chemical and physical restraint as needed.





**Universal Care:
RESPONSE, TREATMENT & TRANSPORT
Operational Policy**

If any one member of the EMS team, regardless of their team assignment, feels it is in the best interest of a patient to be evaluated and/or transported, the EMS unit will evaluate and/or transport the patient. The level of transport will be determined by patient assessment needs and treatment provided.

Advanced procedures are defined in HFS 110 as: prehospital care consisting of basic life support procedures and invasive lifesaving procedures including the placement of advanced airway adjuncts, intravenous infusions, manual defibrillation, electrocardiogram interpretation, administration of approved drugs and other advanced skills identified in the Wisconsin scopes of practice.

Transport shall be to the closest, most appropriate open receiving hospital, taking into consideration:

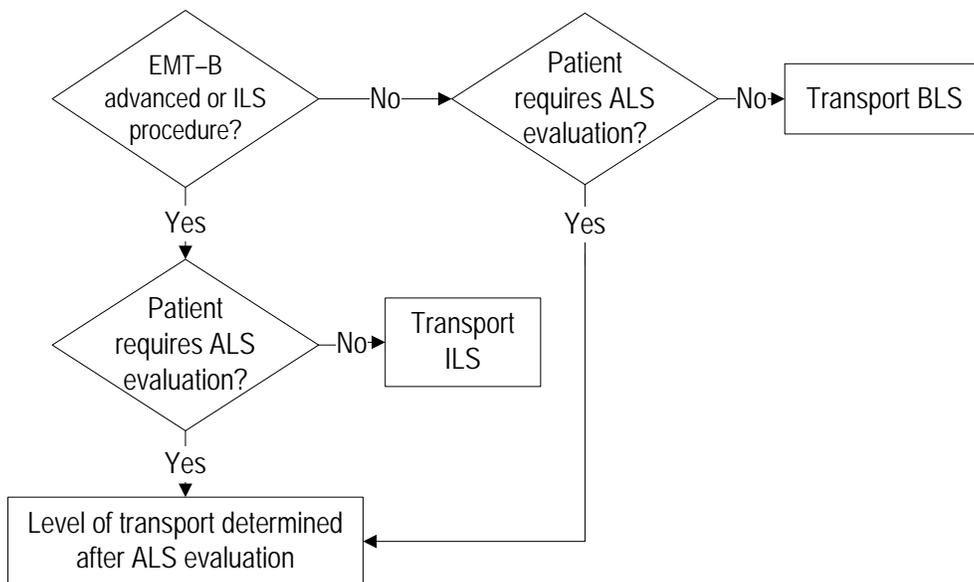
- Patient's medical condition;
- Patient's request;
- Location of regular care, primary medical doctor and/or medical records;
- Insurance/HMO.

Patient needs will dictate transport to a specialty hospital. Documentation on the patient care record should support the decision to transport for specialty care.

Transport from the scene with lights and siren shall only be done when EMS providers are unable to stabilize the patient at the scene.

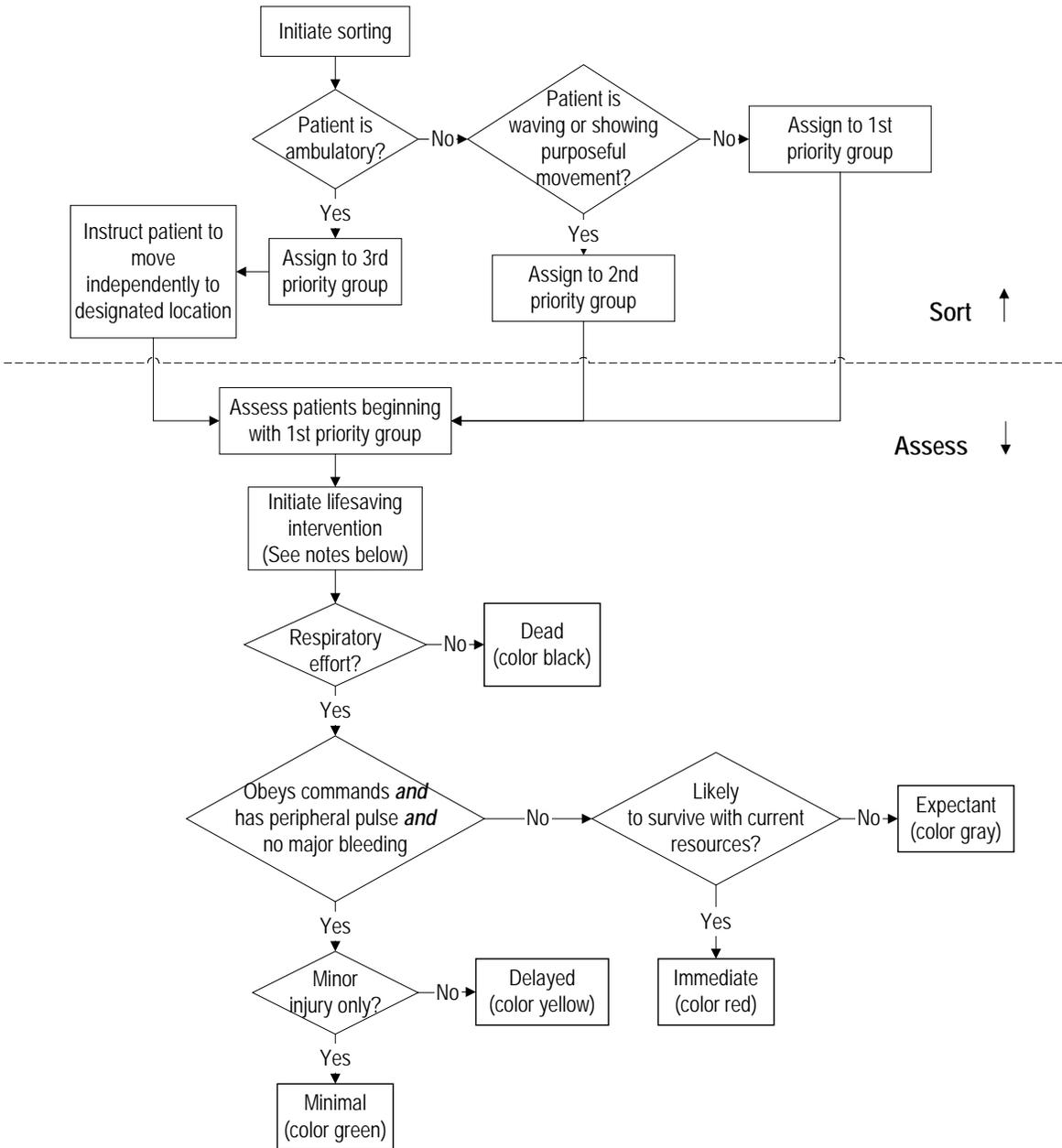
EMS providers shall never advise a patient that transport to a medical facility for examination by a physician is not necessary, or that the patient may drive or be driven in a private vehicle or by other medically unsupervised means. When a patient refuses ambulance transport, the standard for refusal of treatment/transport should be followed.

If a patient refuses care and/or transport and the EMS response team has doubts regarding that patient's ability to make a rational decision, the appropriate authority should be consulted (medical control, guardian, police, etc.).





**Universal Care:
S. A. L. T. - TRIAGE
Practice Guideline**





Universal Care:
S. A. L. T. - TRIAGE
Practice Guideline

NOTES:

- S.A.L.T. – Sort, Assess, Lifesaving Interventions, Treatment/Transport
- Patients should be sorted into priority groups , then receive individual assessment, beginning with the 1st priority group
- Lifesaving interventions include
 - Major hemorrhage control
 - Open airway (consider 2 rescue breaths for children)
 - Chest decompression
 - Autoinjector antidotes (MARK I Kit or DuoDote), if appropriate
- Reassess patients as frequently as possible, as patient conditions may change



**Universal Care:
SCOPE OF PRACTICE:
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(10) = Must have one version of EPI 1:1000 available, (11) = May choose only one for pain control, (12) = Sublingual use only

AIRWAY / VENTILATION / OXYGENATION	EMR	EMT	AEMT	INT	PARA
Airway – Nasopharyngeal	X	X	X	X	X
Airway – Non-Visualized	X**	X	X	X	X
Airway – Oral (Oropharyngeal)	X	X	X	X	X
Airway Obstruction – Forceps & Laryngoscope (direct visual)		X	X	X	X
Airway Obstruction – Manual	X	X	X	X	X
Bag Valve Mask (BVM)	X	X	X	X	X
Capnography, End Tidal CO2 Monitoring		X**(1)	X**(1)	X*	X*
Chest Decompression – Needle				X	X
Chest Seal-Vented Preferred		X	X	X	X
CPAP		X**	X**	X**	X**
Gastric Decompression – For Non-Visualized Airway with Gastric Access	X**	X**	X**	X**	X*
Gastric Decompression – NG/OG Tube					X*
Intubation – Endotracheal					X
Manual Airway Maneuvers	X	X	X	X	X
Oxygen Therapy – Tracheal Tube	X	X	X	X	X
Oxygen Therapy – Nebulizer	X**	X	X	X	X
Oxygen Therapy – Nasal Cannula	X	X	X	X	X
Oxygen Therapy – Non-Rebreather Mask	X	X	X	X	X
Pulse Oximetry	X**	X*	X*	X*	X*
Suctioning – Upper Airway (Soft & Rigid)	X	X	X	X	X

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CARDIOVASCULAR / CIRCULATION	EMR	EMT	AEMT	INT	PARA
12, 15, or 18 Lead ECG		X**(1)	X**(1)	X	X
Cardiopulmonary Resuscitation (CPR)	X	X	X	X	X
Cardioversion – Electrical				X	X
CPR Mechanical Device	X**	X**	X**	X**	X**
Defibrillation – Automated / Semi-Automated (AED)	X	X	X	X*	X*
Defibrillation – Manual		X**	X**	X	X
ECG Monitor		X*(1)	X*(1)	X	X
Hemorrhage Control – Direct Pressure	X	X	X	X	X
Hemorrhage Control – Hemostatic Agents	X**	X**	X**	X**	X*
Hemorrhage Control – Pressure Point	X	X	X	X	X
Hemorrhage Control – Tourniquet	X**	X**	X**	X**	X*
Pericardiocentesis					X
Transcutaneous Pacing				X	X
Valsalva Maneuver				X	X

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IMMOBILIZATION	EMR	EMT	AEMT	INT	PARA
Selective Spinal Immobilization		X**	X**	X**	X*
Spinal Immobilization- Cervical Collar	X**	X	X	X	X
Spinal Immobilization – Long Board	X**	X	X	X	X
Spinal Immobilization – Manual Stabilization	X	X	X	X	X
Spinal Immobilization – Seated Patient (KED, etc)	X**	X	X	X	X
Splinting – Manual	X	X	X	X	X
Splinting – Pelvic Wrap/PASG		X*	X*	X*	X*
Splinting – Rigid	X	X	X	X	X
Splinting – Soft	X	X	X	X	X
Splinting – Traction	X**	X	X	X	X
Splinting – Vacuum	X*	X*	X*	X*	X*
ASSISTED PATIENT MEDICATIONS	EMR	EMT	AEMT	INT	PARA
Glucagon Auto-Injector	X**	X*	X*	X*	X*
Epinephrine Auto-Injector		X*	X*	X*	X*
Nitroglycerin		X*	X*	X*	X*
Oral Glucose	X*	X*	X*	X*	X*
Any Patient Prescribed Emergency Medication with Medical Control Approval				X*(13)	X*(13)

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MEDICATION ADMINISTRATION ROUTES	EMR	EMT	AEMT	INT	PARA
Aerosolized/Nebulized	X**	X	X	X	X
Auto-Injector	X**	X	X	X	X
Endotracheal Tube (ET)				X	X
Intramuscular (IM)		X	X	X	X
Intranasal (IN)	X**	X**	X**	X**	X**
Intraosseous (IO)			X**	X	X
Intravenous (IV)			X	X	X
Oral (PO)	X	X	X	X	X
Rectal				X	X
Subcutaneous (SQ)		X**	X	X	X
Sub-Lingual (SL)		X	X	X	X
INITIATION / MAINTENANCE / FLUIDS	EMR	EMT	AEMT	INT	PARA
Maintenance – Non-Medicated IV Fluids			X	X	X
IV Pump			X**(5)	X**(5)	X(6)
Intraosseous			X**	X*	X*
Peripheral			X(7)	X	X
PICC Line – Access and Use					X**
Saline Lock			X	X	X

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MEDICATIONS APPROVED PER PROTOCOL	EMR	EMT	AEMT	INT	PARA
Adenosine				X	X
Albuterol	X**	X	X	X	X
Amiodarone				X(8)	X
Aspirin	X**	X	X	X	X
Atropine				X	X
Dextrose			X	X	X
Epinephrine Auto-Injector	X**	X*(10)	X*(10)	X*(10)	X
Epinephrine 1:1000 Manually Drawn		X*(10)	X*(10)	X*(10)	X
Epinephrine 1:10,000				X	X
Fentanyl				X(11)	X
Glucagon		X*	X*	X*	X
Glucose-Oral	X	X	X	X	X
Ipratropium (Atrovent)		X*	X*	X	X
Lidocaine				X(8)	X
Mark I Auto-Injector (or equivalent-for Self & Crew)	X**	X**	X**	X*	X
Midazolam (Versed)				X(9)	X
Morphine				X(11)	X
Naloxone (Narcan)	X**	X	X	X	X
Nitroglycerin			X(12)	X(12)	X
Nitrous Oxide			X**	X**	X
Ondansetron (Zofran)				X**	X
Other Short-Acting Beta Agonist for Asthma		X**	X**	X**	X**

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MISCELLANEOUS	EMR	EMT	AEMT	INT	PARA
Assisted Delivery (childbirth)	X	X	X	X	X
Blood Glucose Monitoring	X**	X	X	X	X
Blood Pressure – Automated	X*	X*	X*	X*	X*
Chest Tube Monitoring					X
Eye Irrigation	X	X	X	X	X
Immunizations		X**	X**	X**	X**
Patient Physical Restraint Application		X	X	X	X
Venous Blood Sampling – Obtaining			X**	X**	X**
Vital Signs	X	X	X	X	X

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**Universal Care:
STANDARDS OF PRACTICE, ROLES & RESPONSIBILITIES
Operational Policy**

The mission of Milwaukee County EMS is to provide performance excellence in prehospital care through education, communication, operations, information and quality management, and scientific discovery.

I. Medical Control: It is the responsibility of the Emergency Medical Services Medical Director to:

- Assure that initial training to Emergency Medical Technicians meets the standards established by the State of Wisconsin and the EMS medical community.
- Provide continuing education to maintain knowledge and skill levels.
- Establish General Standards of Care, Medical Protocols, Standards for Practical Skills and Operational Policies and Medical Standards for Special Operations to define and guide professional practice.
- Supervise and evaluate individuals licensed within the system.
- Provide access to additional training or other support services as needed.
- Actively seek solutions to issues identified through the Quality Improvement process.
- Take appropriate corrective actions upon identification of activities by individuals that negatively impact on the EMS system and/or patient care.

II. EMS Provider: It is the responsibility of each individual provider to:

- Attain and maintain knowledge and skills necessary to safely practice as a licensed provider in the Milwaukee County System.
- Provide medical care within the scope of practice with the needs of the patient as the primary concern.
- Accept personal responsibility for maintenance of professional standards.
- Provide emergency medical services as outlined in Standards of Care, Medical Protocols, Standards for Practical Skills Operational Policies and Medical Standards for Special Operations of the Milwaukee County EMS System.
- Conduct his/her practice in a manner that reflects positively on self, peers, the employing agency and Milwaukee County EMS.

III. Performance Improvement process and mechanisms to identify issues and seek solutions

Evaluation and assessment of the quality of care provided to the public and of the individual practitioner in the Milwaukee County EMS System will be conducted on a regular basis. This includes, but is not limited to standards of care and protocol compliance monitoring.



**Universal Care:
STANDARDS OF PRACTICE, ROLES & RESPONSIBILITIES
Operational Policy**

GOAL	MECHANISM
To encourage communication of the strengths and weakness of the system and to search for improvements	<ul style="list-style-type: none"> • Provide an accessible Suggestion Box for members to deposit comments and ideas on improving patient care • Advertise and encourage System feedback via the Incident line at the Milwaukee County EMS Offices.
To monitor the current status of the system	<ul style="list-style-type: none"> • Retrospective patient care record review • Retrospective review of Medical Command Form • Retrospective peer review of tapes and patient care records • Development and dissemination of patient questionnaire
To provide feedback on system and individual performance	<ul style="list-style-type: none"> • Statistical reports on patient interactions • Field evaluations • Continuing education conferences • Refresher courses • Return of peer review of tapes and patient care records to originator of the record for feedback •
To plan for and implement system improvement	<ul style="list-style-type: none"> • Focused audits to identify issues • Continuing education conferences • Participation in prehospital research • New product evaluations



**Universal Care:
STANDARDS OF PRACTICE, ROLES & RESPONSIBILITIES
Operational Policy**

IV. Due Process

Upon identification of a potential problem or upon receipt of a complaint regarding provision of prehospital care or the action of any individual(s) licensed within the Milwaukee County EMS System, it is the responsibility of the Medical Director and/or Program Director or his/her designee to investigate the allegations impartially and completely. Issues dealing with fire department policy need to be addressed with that fire department in accordance with their department procedures.

FACT-FINDING PHASE

All complaints or allegations must involve a *specific* incident(s) and may be entered by any individual or organization. Any individual named in a complaint has the right to all information obtained by Milwaukee County EMS, including the source of the complaint.

Fact-finding activities will begin within two (2) working days* of the receipt of the complaint and should be completed within 14 days from initial notification of the incident. The Quality Manager or his/her designee is responsible for the initial contacts and collection of information.

*A "working day" is defined as a normal business day of Monday through Friday exclusive of State or Federal Holidays.

Fact-finding activities will include contact with the complainant for additional information as necessary and telephone or personal contact with the EMS provider(s) involved.

The EMS provider(s) will be informed of the specific complaint and the individual or organization who brought the problem to the attention of Milwaukee County EMS.

The EMS provider(s) will respond verbally, providing such information as necessary to clarify or resolve the issues. Written replies may be requested by the Quality Manager and must be completed and submitted within 9 calendar days.

Information will be reviewed by the Medical Director and/or Program Director or his/her designee.

Any report classified as either *Educational* or *Disciplinary* will advance to the reconciliation phase.

An Education Issue is one in which it is perceived that the complaint/problem was created by a lack of understanding of academic foundation, Standard of Care, Medical Protocol(s) or System Policy(ies).

A Disciplinary Issue is one in which there is willful or repeated violation of a Standard of Practice, Medical Protocol or System Policy where the EMS provider has the appropriate academic foundation and/or has received remedial education regarding the Standard, Protocol or Policy.



RECONCILIATION PHASE

For Educational Issues, the EMS provider(s) involved will be notified by letter of the results of the fact-finding.

- * The letter will be sent to the EMS provider's home address on file at the MC EMS offices.
- * If, in the judgment of the Medical Director, the facts of the situation warrant a meeting to review academic material or policies/procedures, the EMS provider(s) will be instructed in the above letter to contact the Medical Director's office to arrange a meeting date and time.
- * If the EMS provider(s) fails to contact the Medical Director within five (5) days of the date the letter was mailed, the Medical Director or designee will call the EMS provider at his/her place of employment to verify receipt of the letter and to schedule the educational session.
- * The educational session will be conducted by the Medical Director or his/her designee. The time and place of the session will be established when the EMS provider calls the Medical Director but must be scheduled within five (5) working days of the call.
- * Failure to respond to the letter and telephone contact or refusal to attend a scheduled educational conference will be reported, verbally and in writing, to the EMS Liaison of the employing fire department accompanied by a request for formal action by the department. That report will contain the details of the complaint, the results of the fact finding and the documentation of contact with the EMS provider(s) involved.
- * A copy of the fact-finding letter and a summary of the educational session will be kept on file at the Milwaukee County EMS offices.

In Disciplinary Issues, the EMS provider(s) involved will be notified by letter of the results of the fact-finding.

- * The letter will be sent to the EMS provider's home address on file at MC EMS. A copy of that letter will be sent to the EMS Liaison of the employing fire department with a cover letter from the Medical Director requesting disciplinary action.
- * The Medical Director retains the right to impose sanctions on the practice of any individual, including limits placed on patient contact from the start of the fact-finding phase through the disciplinary action of the employing fire department, if a potential risk to public safety is alleged.



**Universal Care:
STANDARDS OF PRACTICE, ROLES & RESPONSIBILITIES
Operational Policy**

Actions requested of the EMS Liaison of the employing fire department by the Medical Director may include but are not limited to:

- * No disciplinary action indicated.
- * Monitoring of performance for a specified time including specifics of who will do the monitoring and the evaluation tools employed to monitor progress.
- * Counseling including specific issues of concern, improvement expected and the evaluation process to be used to determine progress.
- * Written reprimand to the individual with copies to the employing agency and the EMS provider's file at the MC EMS offices.
- * Probation with specifics of the conditional terms under which the EMS provider may continue to practice, the time of reviews and the behavioral changes expected with the evaluation tools to be used to monitor progress.
- * Suspension from EMS provider duties.
- * Withdrawal of Medical Control with written notification of the employing agency and the State of Wisconsin, EMS Section, that the Milwaukee County EMS System will no longer accept any medical responsibility for the actions of the individual.

Records of complaints, results of the investigations and the actions taken will be retained on file at Milwaukee County EMS. EMS provider and patient confidentiality are mandatory.



**Universal Care:
TRANSFER OF CARE
Practice Guideline**

POLICY:

- Patient transfer of care occurs when a patient is transferred from one care provider to another.
- Realistic expectations for EMS Providers and hospital personnel are established to ensure smooth and safe transfer of care.
- Problems identified in the transfer of patient care should be reported to the Milwaukee County EMS Incident Line at (414) 257.6660 or qualityems@milwaukeecountywi.gov.

EMS Provider Expectations of Other EMS Providers:

- A complete patient care evaluation is performed and a transfer of care report performed.
- The patient is appropriate for transfer of care based on patient needs, provider level and EMS system guidelines.
- All EMS providers are agreeable and accountable for the transfer of care as evidence by transfer of care challenge-response (Crew A Challenge to Crew B: This is the SBAT, do you feel it is appropriate to transfer care to you and do you accept responsibility for the transfer of care? Crew B Response to Crew A: Yes/No, I think it is/is not appropriate and I will/will not accept patient transfer).

EMS Provider Expectations of ED staff:

- Allowance of an appropriate verbal transfer of care report in a SBAT format
- Assignment and transfer in a timely fashion by a qualified medical professional
- Assist with patient transfer from EMS transport cot to hospital bed

ED Staff Expectations of EMS Providers:

- Transport notification provided as early as possible utilizing system designated alerts (STEMI, Stroke, Trauma, Sepsis, Isolation, etc.) when appropriate; ECG's as appropriate
- Verbal transfer of care report in a SBAT format
- Patient transport to area as directed (triage, trauma room, L&D, etc.)
- Make available a copy of the written report or electronic patient care record.
- Placement of medical waste in appropriate receptacle/area

Verbal Report between healthcare providers should allow for a brief, quite "time out" to convey key elements of patient care in the SBAT format:

Situation	A brief concise statement of the problem
Background	Pertinent information that provides adequate background of the situation.
Assessment	What is the EMS working assessment; what do you think may be the main complaint, injuries, or concerns for the patient.
Treatment	What treatments have been performed and how did the patient respond to the intervention.



Milwaukee County Office of Emergency Management-EMS Division (OEM-EMS)

**Universal Care:
TRANSPORT DESTINATION - HOSPITALS
Operational Policy**

POLICY: Patients are to be transported to the closest, most appropriate, receiving hospital, taking into consideration:

- Patient's medical condition
- Patient's request
- Location of regular care, primary medical doctor and/or medical records
- Insurance/HMO

Patients in need of specialty care should be transported to the closest appropriate receiving facility, based on the following information:

Ascension: CSM Milwaukee CSM Ozaukee WF All Saints (Racine) WF Elmbrook Memorial WF Franklin WF St. Francis WF St. Joseph		Aurora: Grafton Sinai St. Luke's – Milwaukee St. Luke's – South Shore West Allis Memorial/Women's Pavilion Children's Hospital and Health System Children's Hospital of Wisconsin		Froedtert Health: Community Memorial Froedtert ProHealth Care: Waukesha Memorial Zablocki VA Medical Center (VA)	
Patient Assessment:		Specialty Hospital:			
STEMI (STEMI or Acute MI per pre-hospital ECG) ROSC		Transport to closest hospital: Aurora Grafton; St. Luke's Milwaukee; Children's Hospital of Wisconsin; CSM-Milwaukee; CSM-Ozaukee; Froedtert Hospital; Waukesha Memorial; All Saints; Elmbrook Memorial; St. Francis; St. Joseph; Wheaton Franklin. If patient is stable and requests transport to medical home, transport to closest STEMI/ROSC hospital within medical system.			
Code Stroke - LVO Negative LKW less than 24 hours		Transport to closest Primary Stroke Center (PSC): Aurora Grafton; Aurora Sinai; St. Luke's Milwaukee; West Allis Memorial; St. Luke's South Shore; Children's Hospital of Wisconsin; CSM-Milwaukee; CSM-Ozaukee; Community Memorial; Froedtert Hospital; Waukesha Memorial; All Saints; Elmbrook Memorial; St. Francis; St. Joseph; Wheaton Franklin. If patient is stable and requests transport to medical home, transport to closest stroke hospital within medical system.			
Code Stroke - LVO Positive LKW less than 24 hours		Transport to closest Comprehensive Stroke Center (CSC) or Thrombectomy Capable Stroke Center (TCSC): CSM-Milwaukee; Froedtert; St. Luke's Milwaukee NOTE: Direct transport to CSC or TCSC if it <u>does not add</u> >15 min to closest PCS transport time			
Need for Trauma Center evaluation Burns and/or possible CO poisoning WITH major/multiple trauma		Children's Hospital of Wisconsin Froedtert Hospital			
Possible CO poisoning with altered mental status, WITHOUT burns/major trauma		Transport to the closest: St. Luke's - Milwaukee			
Significant burns (thermal, chemical or electrical) <i>with or without</i> possible CO poisoning WITHOUT major trauma		CSM - Milwaukee			
Other hyperbaric (air embolism, decompression disease, bends, SCUBA)		Transport to the closest: St. Luke's - Milwaukee			
Major pediatric illness/injury		Children's Hospital of Wisconsin			
Pediatric burns (Age <12)		Children's Hospital of Wisconsin			
Unstable newborns		Transport to the closest Neonatal Intensive Care Unit: Children's Hospital of Wisconsin St. Joseph CSM - Milwaukee All Saints - Racine			

Initiated: 12/08/1992
 Reviewed/Revised: 03/01/2018
 Revision 44

Approved: M. Riccardo Colella, DO, MPH, FACEP
 Approved: EMS Division Director Kenneth Sternig, RN

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**Universal Care:
TRANSPORT DESTINATION - HOSPITALS
Operational Policy**

OB patients in labor	<p>1. Facility where patient received their prenatal care is preferred. Hospitals never close to women in labor. <i>For gestational age less than 20 weeks, patient will be evaluated in ED.</i></p> <p>2. For imminent delivery, transport to the closest open hospital: Aurora Grafton; Aurora Sinai; West Allis Memorial; CSM-Milwaukee; CSM-Ozaukee; Community Memorial, Froedtert Hospital, Waukesha Memorial; All Saints; Elmbrook Memorial; St. Francis; St. Joseph.</p>
<p>Psychiatric Emergencies: Medical clearance needed</p> <p>No medical clearance needed/patient is at high risk for harm to self or others, and/or is behaviorally disruptive (should be placed on Emergency Detention)</p> <p>No medical clearance needed/patient is at low risk for harm to self or others (police involvement not required)</p>	<p>Closest Emergency Department</p> <p>Psychiatric Crisis Service of Milwaukee County Behavioral Health Division (PCS)</p> <p>1. If patient is seen in the Milwaukee County Behavioral Health system (MCBHD), transport to the Psychiatric Crisis Service (PCS) center on a voluntary basis</p> <p>2. If not a patient of MCBHD, transport to closest ED for mental health evaluation</p>
Infection Alert: Ebola Ebola Virus Disease (EVD)	<p>Wheaton Franciscan Healthcare - transport to St. Joseph for stable patients requesting a Wheaton Franciscan hospital</p> <p>All other hospital systems – transport to the closest appropriate hospital</p>

Notes:

- No routine transport to a closed hospital under any circumstances
- Hospitals providing specialty services never close to their specialty
- *WI Trac* will post transport instructions for extenuating circumstances



**Universal Care:
TRANSPORT DESTINATION - HOSPITALS
Operational Policy**

<i>Designation by Hospital</i>							
<i>Hospital</i>	<i>Stroke</i>	<i>STEMI/ ROSC</i>	<i>Trauma</i>	<i>Burn</i>	<i>Unstable Newborn</i>	<i>Hyperbaric</i>	<i>Sexual Assault</i>
Aurora Grafton	Primary						
Aurora Sinai	Primary						Over 18 years
Aurora St. Luke's (Main)	Comprehensive LVO					CO without burns	
Aurora St. Luke's - South Shore	Primary						
Aurora West Allis	Primary						Over 18 years
Children's Hospital of Wisconsin	Primary		Under 18 years	Under 12 years			Under 18 years
Columbia St. Mary's - Milwaukee	Primary LVO			12 years & over			
Columbia St. Mary's - Ozaukee	Primary						
Froedtert Community Memorial	Primary						
Froedtert Hospital	Comprehensive LVO		18 years & over				Over 18 years
Waukesha Memorial	Primary						
Wheaton Franciscan All Saints (Racine)	Primary						
Wheaton Franciscan Elmbrook Memorial	Primary						
Wheaton Franciscan Franklin	Primary						
Wheaton Franciscan St. Francis	Primary						
Wheaton Franciscan St. Joseph	Primary						

Note:

White box = hospital open to specialty services Gray box = hospital does not offer specialty service; no transport

Initiated: 12/08/1992
Reviewed/Revised: 03/01/2018
Revision 44

Approved: M. Riccardo Colella, DO, MPH, FACEP
Approved: EMS Division Director Kenneth Sternig, RN



**Universal Care:
TRANSPORT DESTINATION – FREE STANDING EMERGENCY DEPARTMENTS
Operational Policy**

- Milwaukee County EMS recognizes approved Free Standing Emergency Departments (FSED) as an additional community resource and transport destination for the appropriately identified EMS patient.
- FSED's can stabilize emergencies and arrange secondary transfer for patients that need traditional acute care hospital services.
- FSED's do not have in-patient beds, surgery suites, interventional labs, or other customary support services of traditional acute care hospitals.
- Secondary transfer from a FSED to an acute care hospital may have inherent delays to life or time-sensitive interventions and other immediate support needs of an acute care hospital regardless of a seamless transfer process.
- Secondary transfer from a FSED to a hospital may be associated with increased costs to patients (second ambulance bill, other professional services, etc.).
- MCEMS strongly recommends that the following patient types **NOT** be transported to a FSED*:
 - Meeting Level I/II trauma center criteria
 - Field identified STEMI
 - Field identified Stroke
 - Post-Cardiac Arrest Syndromes (ROSC)
 - Pregnant > 20 weeks of gestational age with obstetric related concerns
 - Meeting Burn Center Criteria
 - Open fractures
 - Major pediatric injury or illness
 - With advanced airway that is adequately managed

* If a patient is experiencing a life-threatening condition that is unable to be managed by EMS providers in the field and that will likely decompensate prior to reaching an acute care hospital, EMS providers can transport such patients to a FSED if it is the closest emergency department for stabilization.

Current Free Standing Emergency Departments within the Milwaukee County EMS response area

1.	Moorland Reserve Emergency Department of Froedtert and the Medical College of Wisconsin-Community Memorial Hospital; 4805 S. Moorland Road New Berlin, WI 53151
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Patient Care Goals

Facilitate appropriate initial assessment and management of any EMS patient and link to appropriate specific guidelines as dictated by the findings within the universal care guideline

Patient Presentation

Inclusion Criteria

All patient encounters with and care delivery by EMS personnel

Exclusion Criteria

None

Patient Management

Assessment

1. Assess scene safety: evaluate for hazards to EMS personnel, patient, bystanders
 - a. Determine number of patients
 - b. Determine mechanism of injury
 - c. Request additional resources if needed. Weigh the benefits of waiting for additional resources against rapid transport to definitive care
 - d. Consider declaration of mass casualty incident if needed
2. Use appropriate personal protective equipment
3. Consider spine motion restriction if trauma
4. Primary Survey (**A**irway, **B**reathing, **C**irculation; **C**irculation, **A**irway, **B**reathing if major hemorrhage).
 - a. Airway: assess for patency and open the airway as indicated
 - i. Patient is unable to maintain airway patency—open airway
 1. Head tilt chin lift
 2. Jaw thrust
 3. Suction
 4. Consider use of the appropriate airway management adjuncts and devices: oral airway, nasal airway, supraglottic airway device (King) endotracheal tube
 - ii. Obstructed airway: manage per guideline.
 - b. Breathing:
 - i. Evaluate rate, breath sounds, accessory muscle use, retractions, patient positioning
 - ii. Administer oxygen as appropriate with a goal of > 94% oxygen saturation for most acutely ill patients
 - iii. Apnea (not breathing): manage per guideline.
 - c. Circulation:
 - i. Assess pulse
 1. If none: manage per guideline
 2. Assess rate and quality of carotid and radial pulses
 - ii. Evaluate perfusion by assessing skin color and temperature
 1. Evaluate capillary refill
 2. Control any major external bleeding.



d. Disability

- i. Evaluate patient responsiveness: Glasgow Coma Scale (see table below)
- ii. Evaluate gross motor and sensory function in all extremities
- iii. Evaluate blood glucose in patients with altered mental status
- iv. If acute stroke suspected, manage per guideline.

Expose patient as appropriate to complaint

- i. Be considerate of patient modesty
- ii. Keep patient warm

5. Secondary Survey

The performance of the secondary survey should not delay transport in critical patients. See also secondary survey specific to individual complaints in other protocols. Secondary surveys should be tailored to patient presentation and chief complaint. The following are suggested considerations for secondary survey assessment:

a. Head:

- i. Pupils
- ii. Naso-oropharynx
- iii. Skull and scalp

b. Neck

- i. Jugular venous distension
- ii. Tracheal position

c. Chest

- i. Retractions
- ii. Breath sounds
- iii. Chest wall deformity

d. Abdomen/Back

- i. Flank/abdominal tenderness or bruising
- ii. Abdominal distension

e. Extremities

- i. Edema
- ii. Pulses
- iii. Deformity

f. Neurologic

- i. Mental status/orientation

g. Motor/sensory



6. Obtain baseline vital signs

- a. An initial full set of vital signs is required: pulse, blood pressure, respiratory rate, neurologic status assessment. Neurologic status assessment involves establishing a baseline and then trending any change in patient neurologic status.
- b. Patients with cardiac or respiratory complaints
 - i. Pulse oximetry
 - ii. 12-lead EKG should be obtained early in patients with cardiac complaints
 - iii. Continuous cardiac monitoring, if available
 - iv. Consider waveform capnography
- c. Patient with altered mental status
 - i. Assess blood glucose
 - ii. Consider waveform capnography
- d. Stable patients should have at least two sets of pertinent vital signs. Ideally, one set should be taken shortly before arrival at receiving facility
- e. Critical patients should have pertinent vital signs frequently monitored

7. Obtain OPQRST history:

- a. O: onset of symptoms
- b. P: provocation – location; any exacerbating or alleviating factors
- c. Q: quality of pain
- d. R: radiation of pain
- e. S: severity of symptoms - pain scale
- f. T: time of onset and circumstances around onset

8. Obtain SAMPLE history:

- a. S: symptoms
- b. A: allergies - medication, environmental, and foods
- c. M: medications - both prescription and over-the-counter; bring all containers to hospital if possible
- d. P: past medical history
 - i. look for medical alert tags, portable medical records, advance directives
 - ii. look for medical devices/implants: some common ones may be dialysis shunt, insulin pump, pacemaker, central venous access port, gastric tubes, urinary catheter
- e. L: last oral intake
- f. E: events leading up to the 911 call. In patient with syncope, seizure, altered mental status, or acute stroke, consider bringing witness to the hospital or obtain their contact phone number to provide to ED care team



Treatment and Interventions:

1. Oxygen supplementation if needed to reach target of > 94%
2. Place appropriate monitoring equipment as dictated by assessment. These may include
 - a. Continuous pulse oximetry
 - b. Cardiac rhythm monitoring
 - c. Waveform capnography
 - d. Carbon monoxide assessment
3. Establish vascular access if indicated (need for IV medication, need for fluid resuscitation) or in patients who are at risk for clinical deterioration based on paramedic judgement; routine placement of vascular access not encouraged unless indicated.
4. Monitor pain scale if appropriate
5. Reassess patient

Patient safety considerations

1. Routine use of lights and sirens is not warranted
2. Be aware of legal issues and patient rights as they pertain to and impact patient care, e.g. patients with functional needs or children with special healthcare needs
3. Be aware of potential need to adjust management based on patient age and/or comorbidities, including medication dosages
4. The maximum weight-based dose of medication administered to a pediatric patient should not exceed the maximum adult dose except where specifically stated in a patient care guideline
5. Online Medical Control should be contacted when mandated or as needed for specific consultation

Notes/Educational Pearls

Key considerations

1. Pediatrics: use a weight-based assessment tool (length-based tape or other system) to estimate patient weight and guide medication therapy and adjunct choice. Although the defined age varies by state, the pediatric population is generally defined by those patients who weigh up to 40 kg or up to 14 years of age, whichever comes first
2. Geriatrics: although the defined age varies by state, the geriatric population is generally defined as those patients who are 65 years old or more. In these patients, as well as all adult patients, reduced medication dosages may apply to patients with renal disease (i.e. on dialysis or a diagnosis of chronic renal insufficiency) or hepatic disease (i.e. severe cirrhosis or end-stage liver disease)
3. Co-morbidities: reduced medication dosages may apply to patients with renal disease (i.e. on dialysis or a diagnosis of chronic renal insufficiency) or hepatic disease (i.e. severe cirrhosis or end-stage liver disease)



**Universal Care:
UNIVERSAL CARE
Practice Guideline**

4. Vital signs:

a. Oxygen

Goal oxygen saturation is > 94%. Supplemental oxygen administration is warranted to patients with oxygen saturations below this level and titrated based upon clinical condition, clinical response, and geographic location and altitude

b. Normal vital signs—see chart below

- i. Hypotension is considered a systolic blood pressure less than the lower limit on the chart
- ii. Tachycardia is considered a pulse above the upper limit on the chart
- iii. Bradycardia is considered a pulse below the lower limit on the chart
- iv. Tachypnea is considered a respiratory rate above the upper limit on the chart
- v. Bradypnea is considered a respiratory rate below the lower limit on the chart

5. Secondary survey may not be completed if patient has critical primary survey problems

6. In critical patients, proactive patient management should occur simultaneously with assessment. Ideally, one provider should be assigned to exclusively monitor and facilitate patient-focused care. Treatment and Interventions should be initiated as soon as practicable, but should not impede extrication or delay transport to definitive care

Quality Improvement

Key Documentation Elements

- 1. At least two full sets of vital signs should be documented for every patient
- 2. All patient interventions should be documented

Performance Measures

- 1. Abnormal vital signs should be addressed and reassessed
- 2. Response to therapy provided should be documented including pain scale reassessment if appropriate
- 3. Limit scene time for patients with time-critical illness or injury unless clinically indicated

Normal Range Pediatric Vital Signs

Heart Rate

Age	Awake Rate	Sleeping Rate
Newborn to 3 months	85-205	80-160
3 months to 2 years	100-190	75-160
2 years to 10 years	60-140	60-90
>10 year	60-100	50-90



**Universal Care:
UNIVERSAL CARE
Practice Guideline**

Respiratory Rate

Age	Rate
Infant	30-60
Toddler	24-40
Preschooler	22-34
School Age	18-30
Adolescent	12-16

Blood Pressure of HYPOTENSION (Minimum SBP)

Age	Systolic BP mm/Hg
Term neonate (0-28 days)	< 60 mm/Hg
Infants (1 to 12 months)	<70 mm/Hg
Children (1 to 10 years)	<70 + (Age in years x2) mm/Hg
Children > 10 years	<90 mm/Hg

Normal Range Adult Vital Signs

Heart Rate	60-100
Respiratory Rate	12-16
Blood Pressure	90-140 systolic/50-90 diastolic

Temperature Range (rounded)

Hypothermia	Less than 97F/36 C
Hyperthermia including fever	Greater than 100.4 F/ 38 C



**Universal Care:
UNIVERSAL CARE
Practice Guideline**

Glasgow Coma Scale

ADULT GLASGOW COMA SCALE

Eye Opening (4)	
Spontaneous	4
To Speech	3
To Pain	2
None	1
Best Motor Response (6)	
Obeys Commands	6
Localizes Pain	5
Withdraws From Pain	4
Abnormal Flexion	3
Abnormal Extension	2
None	1
Verbal Response (5)	
Oriented	5
Confused	4
Inappropriate	3
Incomprehensible	2
None	1
Total	

PEDIATRIC GLASGOW COMA SCALE

Eye Opening (4)	
Spontaneous	4
To Speech	3
To Pain	2
None	1
Best Motor Response (6)	
Spontaneous Movement	6
Withdraws to Touch	5
Withdraws from Pain	4
Abnormal Flexion	3
Abnormal Extension	2
None	1
Verbal Response (5)	
Coos, Babbles	5
Irritable Cry	4
Cries to Pain	3
Moans to Pain	2
None	1
Total	



**Universal Care:
UNIVERSAL PRECAUTIONS
Practice Guideline**

Policy: Universal precautions are to be taken to prevent the exposure of personnel to potentially infectious body fluids.

- All EMS providers will routinely use appropriate barrier precautions to prevent skin and mucous membrane exposure when anticipating contact with patient blood or other body fluids.
- Non-latex gloves will be worn when in contact with blood or body fluids, mucous membranes or non-intact skin of all patients, for handling items or surfaces soiled with blood or body fluids and for performing venipunctures or other vascular access procedures.
- Masks and protective eye wear or face shields will be worn to prevent exposure of mucous membranes (mouth, nose and eyes) of the EMS provider during procedures likely to generate droplets of blood or other body fluids.
- Liquid-impervious gowns will be worn during procedures likely to generate droplets of blood or other body fluids (e.g. OB delivery).
- A high efficiency particulate air (HEPA) respirator will be worn when in contact in an enclosed area with a patient suspected of having pulmonary tuberculosis, meningitis, or any other communicable disease transmitted by airborne or droplet method.

Hand washing:

- A non-water-based antiseptic cleaner is to be used at the emergency scene whenever body secretions or blood soils the EMS provider's skin. Skin surfaces will be washed with soap and water at the first opportunity.
- Liquid hand soap is preferable to bar soap for hand washing. If bar soap is used, it should be kept in a container that allows water to drain away. The bar should be changed frequently.
- Paper towels will be available to dry hands. A "community" cloth towel is not to be used.
- Hand washing is not to be done in a sink used for food preparation or clean up.

Disposal of contaminated sharps:

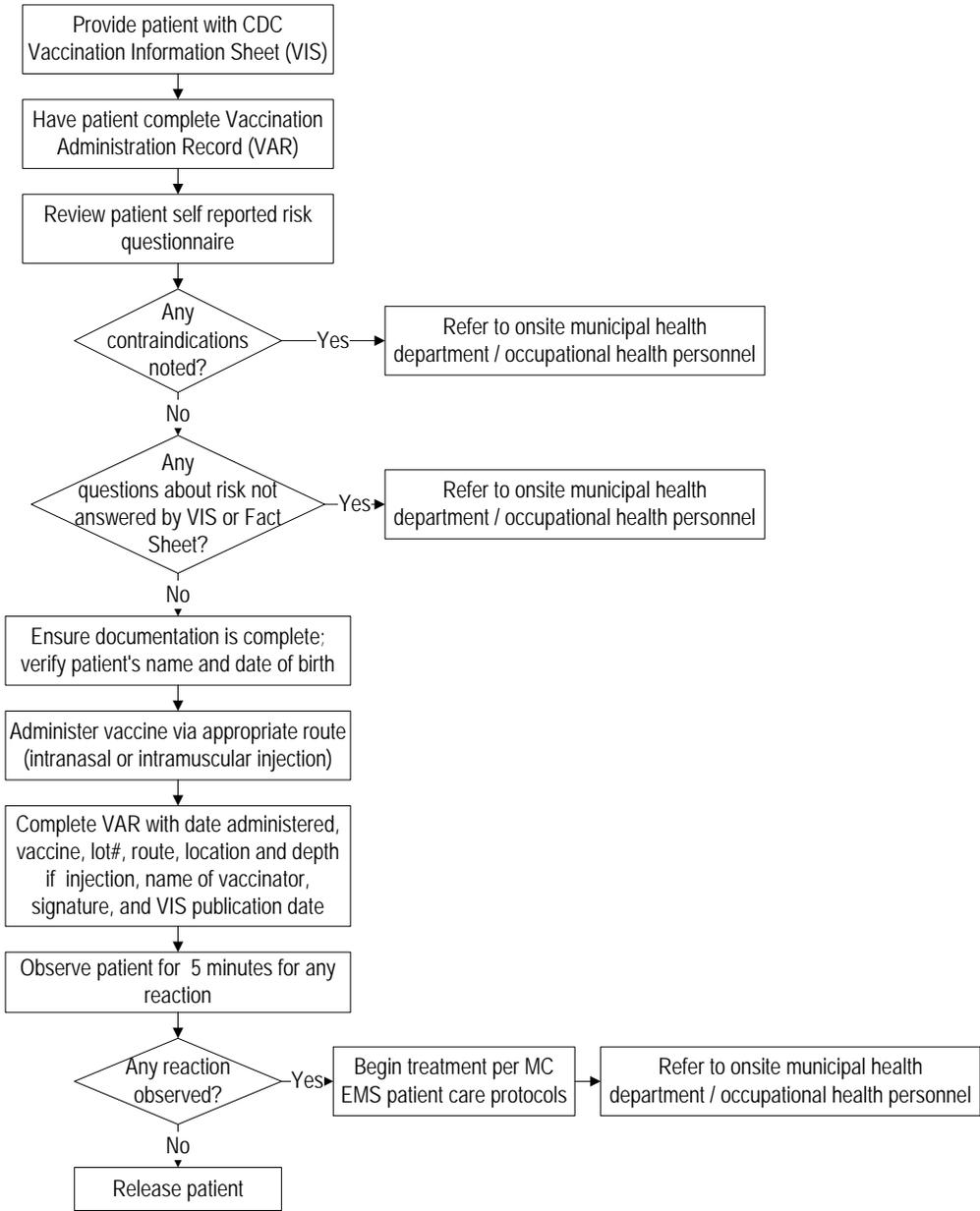
- Every effort is to be made to avoid injuries caused by needles and other sharp instruments contaminated with blood or body fluids. Safety-engineered sharps should be used whenever practical.
- If a contaminated needle receptacle is not readily available, the cap of the contaminated needle is to be placed on a flat surface and "scooped up" with the contaminated needle to avoid the potential of a needle stick into the hand holding the needle cap.
- Appropriately labeled bio-hazard sharps containers should be disposed of at an appropriate reception site when they are 3/4 full. Needles or other contaminated sharps should never protrude from the bio-hazard sharps container.

Any prehospital EMS provider who has reason to suspect s/he may have sustained a significant exposure shall follow their departmental procedure for reporting, testing and follow-up.



**Universal Care:
VACCINE ADMINISTRATION
Operational Policy**

Policy: Vaccines may be administered at sites outside of municipal health department (MHD) clinics under special circumstances, as approved by the Immunization Program Manager or authorized public or occupational health representative. A municipal fire department is an approved off site location for immunization administration.



NOTES:

- Vaccinations will be administered only as part of an approved program in cooperation with public or occupational health services.



**Cardiovascular:
ACUTE CORONARY SYNDROME
Medical Protocol**

Patient Care Goals

1. Identify STEMI quickly
2. Determine the time of symptom onset
3. Activate hospital-based STEMI system of care
4. Monitor vital signs and cardiac rhythm and be prepared to provide CPR and defibrillation if needed
5. Administer appropriate medications
6. Transport to appropriate facility

Patient Presentation:
Inclusion Criteria

1. Chest pain, discomfort in other areas (e.g. arm, jaw, epigastrium) of suspected cardiac origin, shortness of breath, nausea, vomiting and dizziness.
2. Atypical or unusual symptoms are more common in women, the elderly and diabetic patients. May also present with CHF, syncope and/or shock

Patient Management:
Inferior Wall STEMI

- Avoid the use of nitroglycerin
- Consider a fluid bolus

****Nitroglycerin** 0.4mg SL, can repeat q3-5 minutes as long as SBP greater than 100mmHg

- Avoid in patients with phosphodiesterase inhibitor use within the past 72 hours
- Avoid in patients with inferior wall STEMI.

^HFentanyl 0.5 to 1mcg/kg IN, IV, IO, IM, can repeat q10 minutes

- Maximum cumulative dose of 300mcg over duration of transport if needed

Patient Safety Considerations:

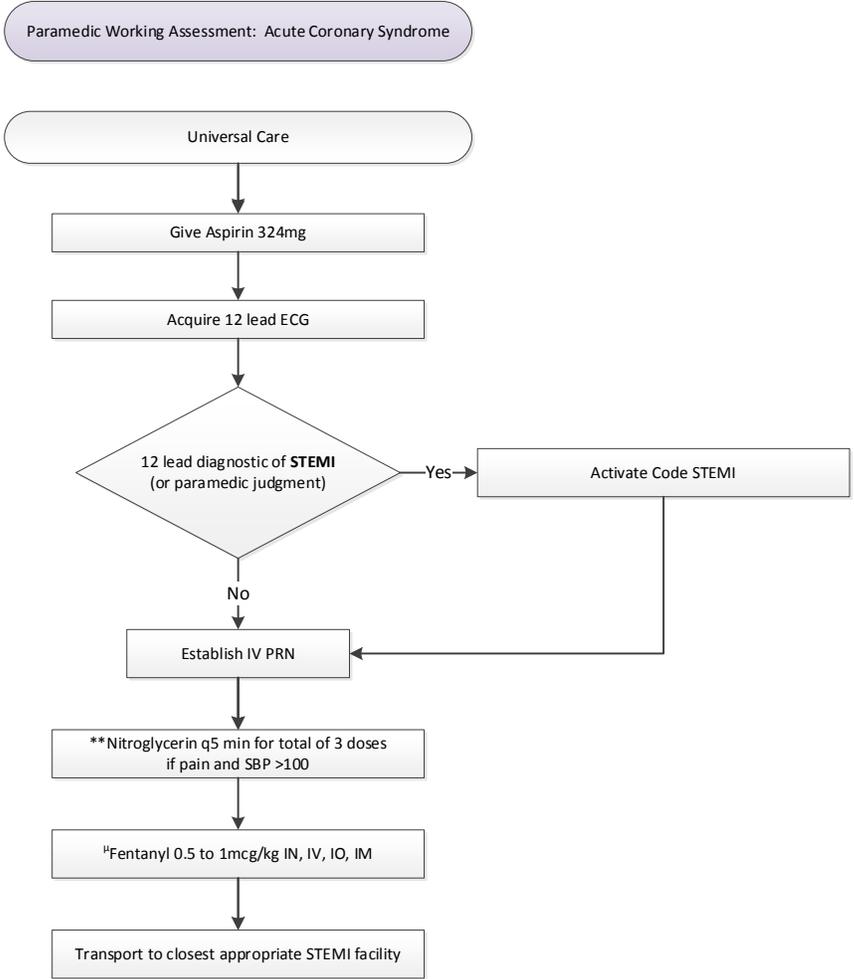
1. Observe for signs of clinical deterioration: dysrhythmias, CP, SOB, decreased LOC/syncope, or other signs of shock/hypotension
2. Perform serial 12-lead EKGs PRN for symptom changes
3. Age, gender, patient initials mandatory on all ECGs

Quality Improvement:
Key Documentation Elements

1. Time of symptom onset
2. Time of patient contact by EMS to time of 12-lead acquisition
3. Time of ASA administered, or reason why not given
4. Time of STEMI notification
5. Pain medication given

Performance Measures

1. FMC to first diagnostic 12-lead within 10 minutes
2. First diagnostic 12-lead to STEMI notification within 10 minutes
3. Confirmation patient received aspirin (taken prior to EMS arrival, given by EMS, or substantiated by other pertinent negatives)
4. Patient given pain medication
5. Scene less than 15 minutes
6. FMC to hospital arrival within 30 minutes





**Cardiovascular:
BRADYCARDIA WITH PULSES - ADULT
Medical Protocol**

Patient Care Goals:
 1. Maintain adequate perfusion
 2. Restore regular sinus rhythm, correct rhythm disturbance if unstable
 3. Search for underlying cause (hypoxia, shock, second or third degree AV block, toxin exposure)

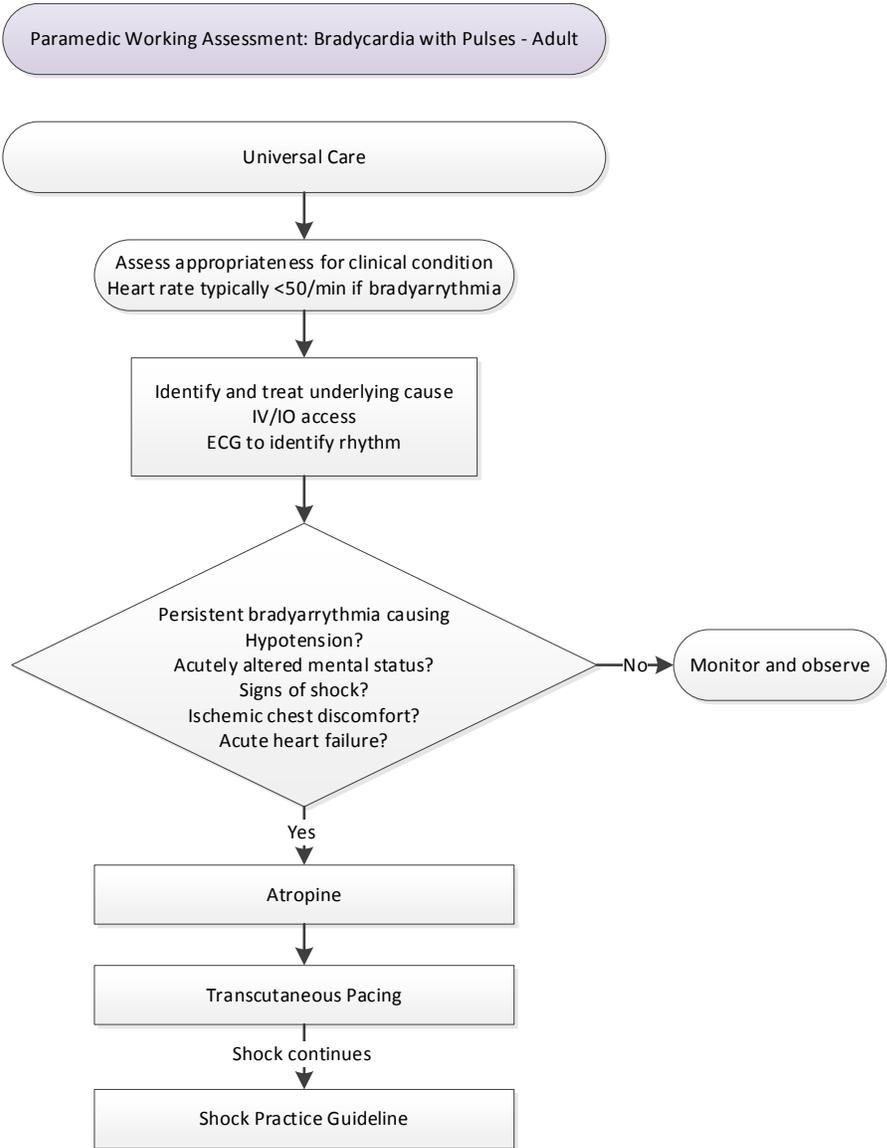
Patient Presentation:
 May present with symptoms such diaphoresis, dyspnea, chest pain, syncope/near syncope, hemodynamic instability, altered mental status
Inclusion Criteria
 Heart rate <50 in adults
Exclusion criteria
 No specific recommendations

Atropine:
 0.5 mg IV/IO q 3-5 min to max of 3mg.
 Patients with heart transplant will not respond to atropine.
 Second degree type II and Third degree heart block will likely need TCP; use atropine as bridge to TCP.

Transcutaneous pacing (TCP):
 Set pacer to fixed mode, Rate 70, output 50mA
 Determine electrical capture and mechanical capture (right sided pulses), increase rate by 5 and/or output by 10mA to ensure/maintain capture

Quality Improvement:
 Key Documentation Elements
 1. Heart rate and rhythm changes
 2. Interventions
 3. Mental status or signs of instability

Patient Safety Considerations
 If pacing is performed, consider sedation/pain control
 Routine use of lights and sirens is not recommended during transport unless hemodynamically unstable





**Pediatric Specific:
BRADYCARDIA WITH PULSES - PEDIATRIC
Medical Protocol**

Patient Care Goals:

1. Maintain adequate perfusion
2. Restore regular sinus rhythm, correct rhythm disturbance if unstable
3. Search for underlying cause (hypoxia, shock, second or third degree AV block, toxin exposure)

Patient Presentation:

May present with symptoms such diaphoresis, dyspnea, chest pain, syncope/near syncope, hemodynamic instability, altered mental status

Inclusion Criteria

Heart rate <60

Exclusion criteria

No specific recommendations

Epinephrine:

0.01 mg/kg IV/IO q 3-5 min. Repeat as symptoms persist or decompensate.
Atropine 0.02 mg/kg (min of 0.1 mg single dose max of 0.5 mg single dose)

Transcutaneous pacing (TCP):

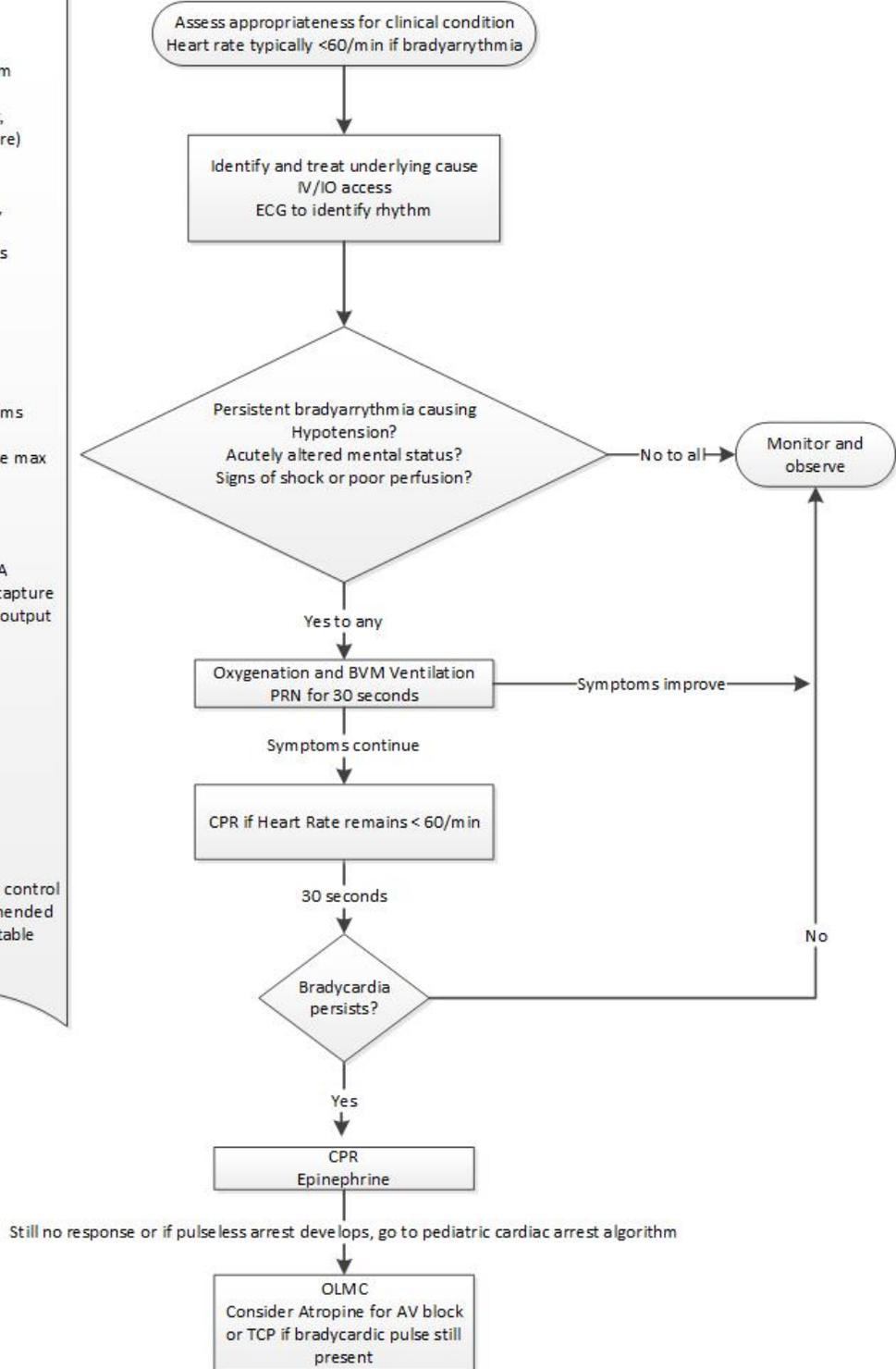
Place pads AP position.
Set pacer to fixed mode, Rate 70, output 50mA
Determine electrical capture and mechanical capture (right sided pulses), increase rate by 5 and/or output by 10mA to ensure/maintain capture

Quality Improvement:

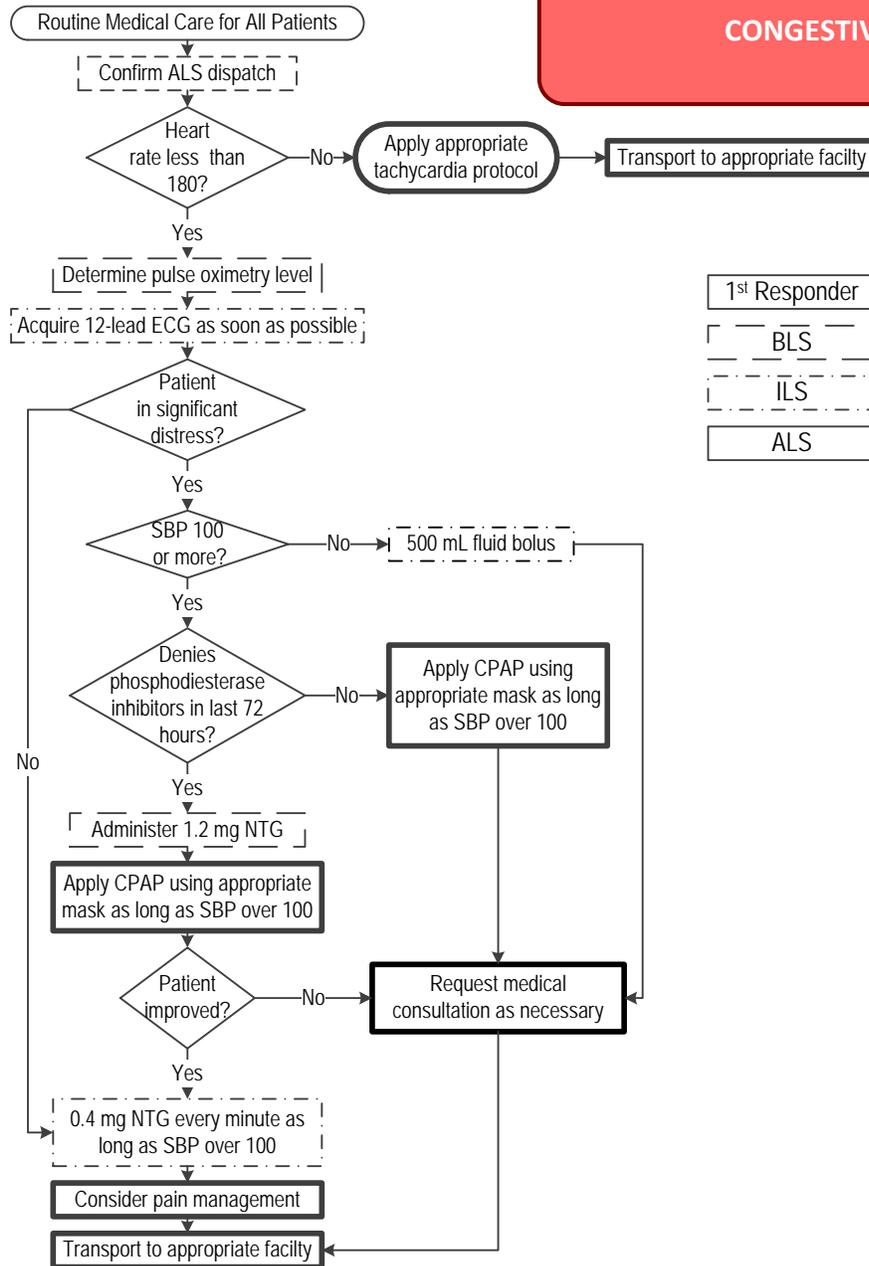
- Key Documentation Elements
1. Heart rate and rhythm changes
 2. Interventions
 3. Mental status or signs of instability

Patient Safety Considerations

If pacing is performed, consider sedation/pain control
Routine use of lights and sirens is not recommended during transport unless hemodynamically unstable



Cardiovascular:
CONGESTIVE HEART FAILURE
Medical Protocol



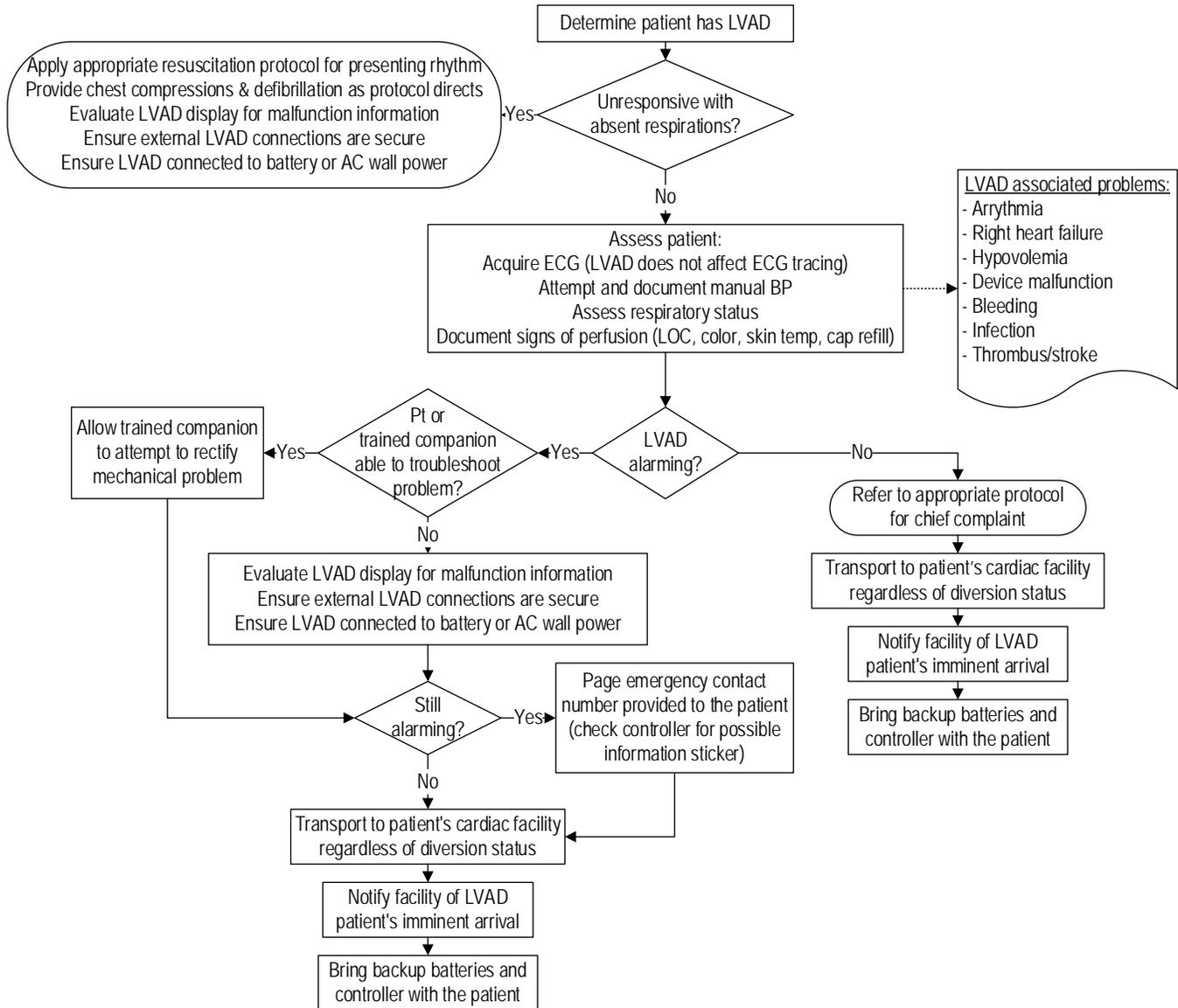
1st Responder
BLS
ILS
ALS

Notes:

- A history of CHF is not required before treatment is initiated.
- CPAP should not preclude standard medication administration.



**Cardiovascular:
LEFT VENTRICULAR ASSIST DEVICES
Practice Guideline**



NOTES:

- LVADs *do not generally produce a palpable pulse in the patient*. Assess for other signs of adequate perfusion (alert, warm skin, capillary refill).
- Blood pressures in LVAD patients may be very difficult to detect. ***This is normal for the device!***
 - When attempting to obtain a blood pressure, you may only hear one change in sound. This is the mean pressure and should be 60 – 90 mm Hg. Document this as the systolic BP.
- ***Unless the patient requires treatment for major trauma or burns, the closest appropriate facility is the patient's cardiac hospital, regardless of diversion status. If the patient receives cardiac care outside the Milwaukee area, the default receiving hospitals are St. Luke's – Main Campus or Froedtert for adults, CHW for pediatric patients.*** Be sure to inform the receiving hospital the patient being transported has a LVAD.



**General Medicine:
STROKE
Practice Guideline**

Patient Care Goals:
 1. Identify patients with stroke symptoms, especially those with Large Vessel Occlusion symptoms.
 2. Transport patients to the most appropriate certified stroke center based on LVO screen. *All suspected STROKE patients < age 18 should be transported to CHOW.*
 3. Code Stroke with LVO status

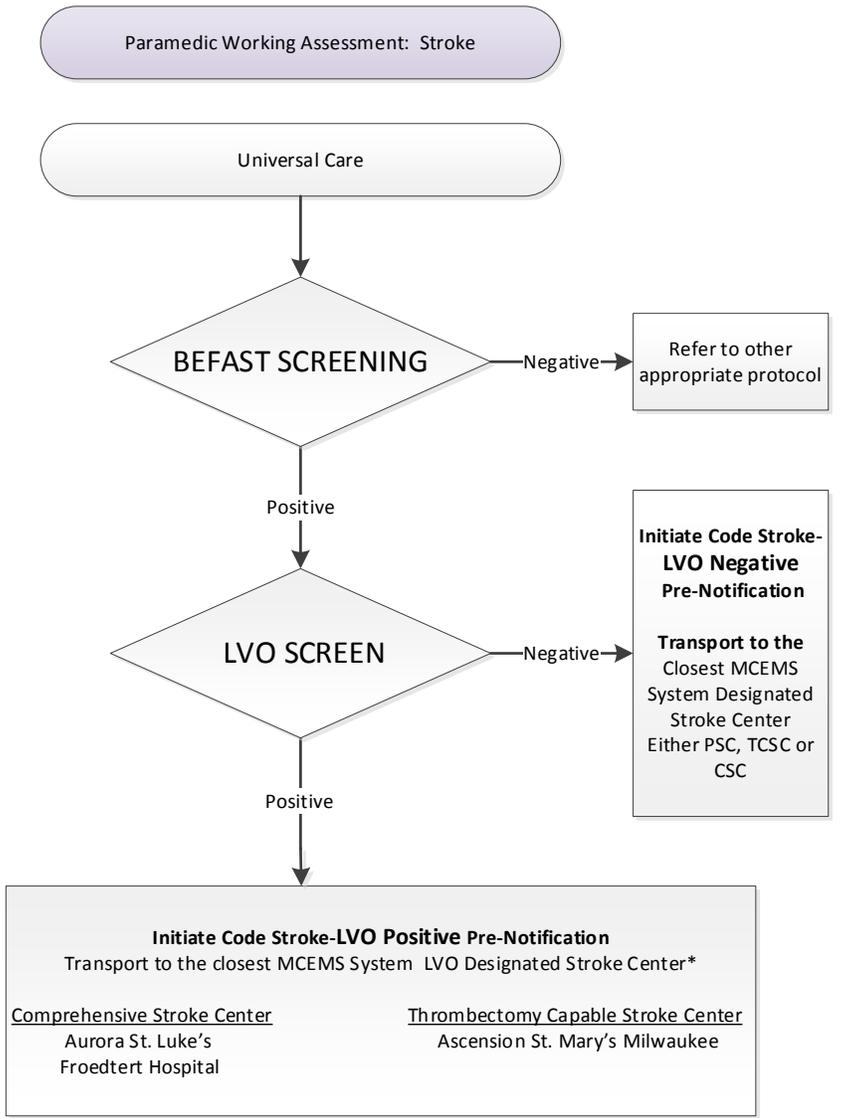
Patient Presentation:
Inclusion Criteria
Last Known Well Time < 24 hours plus any of the following:
BEFAST Screening Inclusion Criteria:
 Balance (sudden loss of balance)
 Eyes (sudden loss of vision)
 Face (face looks uneven suddenly)
 Arm (sudden arm/leg hanging down)
 Speech (suddenly slurred or confused)
 Terrible headache (sudden worst)
LVO SNOw Screening Inclusion criteria:
 Eye gaze deviation
 Aphasia
 Neglect

Exclusion Criteria
 Other conditions

Quality Improvement:
 Key Documentation Elements
 1. Last Known Well Time
 2. Glucose documentation
 3. Identify positive LVO findings
 4. Code Stroke Pre-Notification Time <10 minutes
 5. Scene time less < 15 minutes
 6. Destination hospital
 7. Anticoagulation use

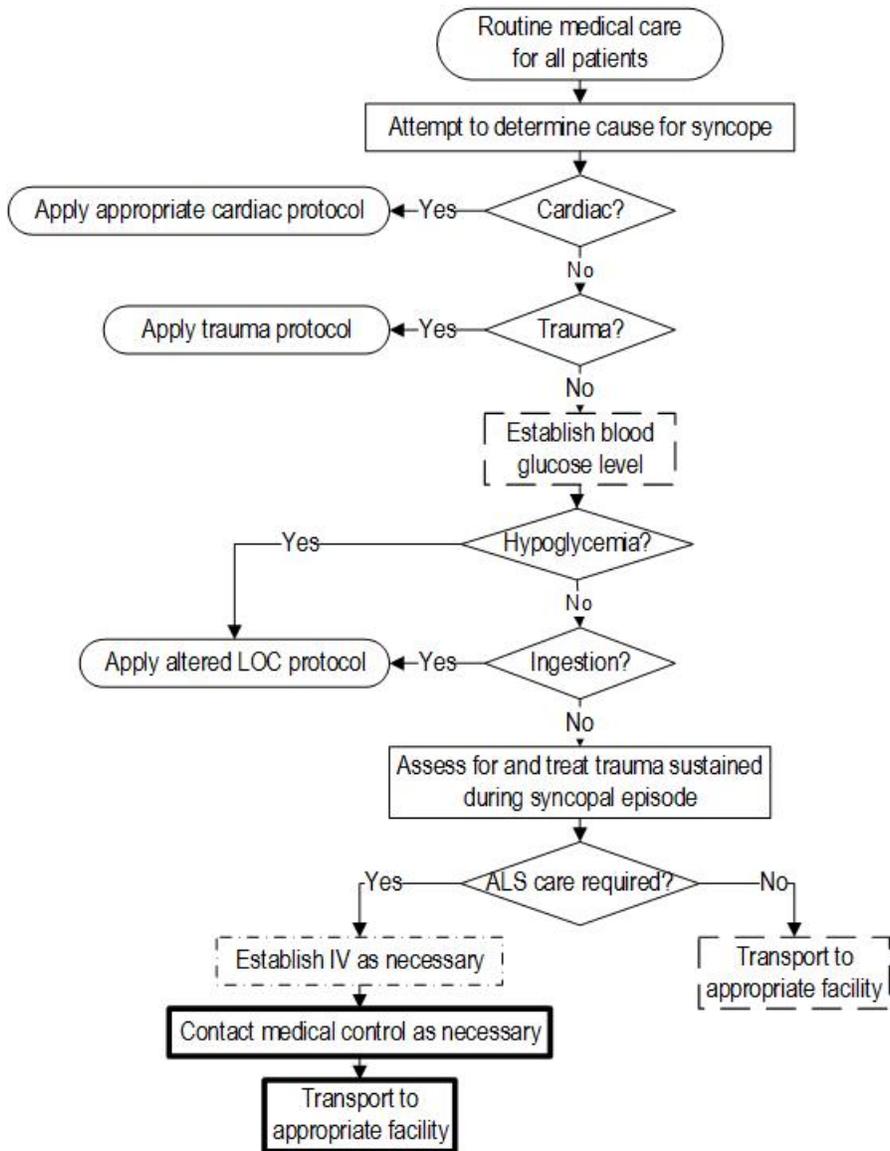
Patient Safety Considerations:
 Safe warning lights and sirens transport may be appropriate with time-sensitive conditions.

Note:
 2018 Joint Commission Stroke Designations:
PSC Primary Stroke Center
TCSC Thrombectomy Capable Stroke Center (LVO)
CSC Comprehensive Stroke Center (LVO)
**Direct transport to LVO center if it does not add >15 min to closest PCS transport time.*





**Cardiovascular:
SYNCOPE
Practice Guideline**



NOTES:

- Assess for signs and symptoms of trauma if associated or questionable fall with syncope.
- Consider underlying cause for syncope and treat accordingly.
- Over 25% of geriatric syncope is due to cardiac dysrhythmia.



**Cardiovascular
TACHYCARDIA WITH PULSES - ADULT
Medical Protocol**

Patient Care Goals:

1. Maintain adequate oxygenation, ventilation, and perfusion
2. Restore regular sinus rhythm, correct rhythm disturbance if unstable
3. Search for underlying cause (medications, drugs, CHF, history of dysrhythmia)

Patient Presentation:
 May present with symptoms such as palpitations, dyspnea, chest pain, syncope/near syncope, hemodynamic instability, altered mental status

Inclusion Criteria
 Heart rate >150 in adults

Exclusion criteria
 Sinus tachycardia

Adenosine:
 Adenosine 12mg IV followed immediately by rapid 10ml flush of NSS. May repeat one additional dose if no improvement within 5 minutes.

Amiodarone:
 150mg IV over 10 minutes.

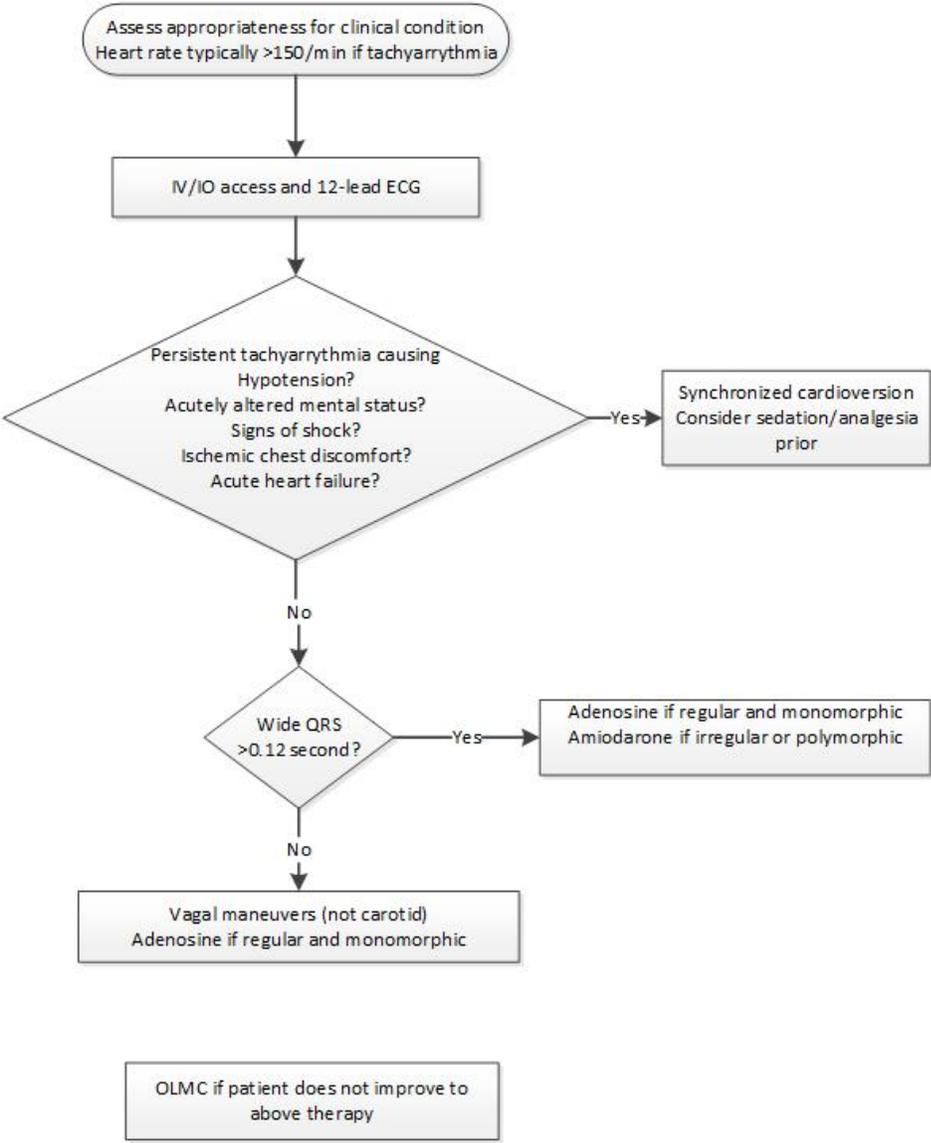
Synchronized Cardioversion:
 100J initially; 150J for subsequent doses.

Sedation/Analgesia PRN stability:
 Midazolam 0.1 mg/kg max of 2 mg.
 Fentanyl 0.5 to 1 mcg/kg max of 100 mcg.

Quality Improvement:
 Key Documentation Elements

1. Heart rate and rhythm changes
2. Interventions
3. Mental status or signs of instability

Patient Safety Considerations
 Routine use of lights and sirens is not recommended during transport unless hemodynamically unstable





Cardiovascular
TACHYCARDIA WITH PULSES - ADULT
Medical Protocol

NOTES:

- Contraindications to adenosine are: heart block, heart transplant, resuscitated cardiac arrest; patients taking theophylline products, Tegretol (carbamazepine, which increases the degree of heart blocks caused by adenosine) or Persantine (dipyridamole, which potentiates the effects of adenosine).
- Because of its short half-life, adenosine must be administered rapid IV bolus followed by a 10 cc normal saline flush
- After administration of adenosine, patient may have a disorganized ECG or brief period of asystole prior to conversion to sinus rhythm. Patients have reported feelings of "impending doom" during this period.
- Adenosine is not effective on atrial fibrillation.
- Carotid massage is not to be performed in the Milwaukee County EMS System.



**Pediatric Specific:
TACHYCARDIA WITH PULSES – PEDIATRIC
Medical Protocol**

Patient Care Goals:

1. Maintain adequate oxygenation, ventilation, and perfusion
2. Restore regular sinus rhythm, correct rhythm disturbance if unstable
3. Search for underlying cause (medications, drugs, CHF, history of dysrhythmia)

Patient Presentation:

May present with symptoms such as palpitations, dyspnea, chest pain, syncope/near syncope, hemodynamic instability, altered mental status

Inclusion Criteria

Heart rate >220/min (infant) or >180/min (child)

Exclusion criteria

Sinus tachycardia

Adenosine:

Adenosine 0.1 mg/kg (max single does of 6 mg) IV followed immediately by rapid 10ml flush of NSS. May repeat one additional dose at 0.2 mg/kg (max single dose of 12 mg) if no improvement within 5 minutes.

Amiodarone:

5 mg/kg IV infusion over 30 minutes (max dose of 300 mg).

Synchronized Cardioversion:

AP Pad Placement
1 J/kg initially; 2 J/kg for subsequent doses.

Sedation/Analgesia PRN stability:

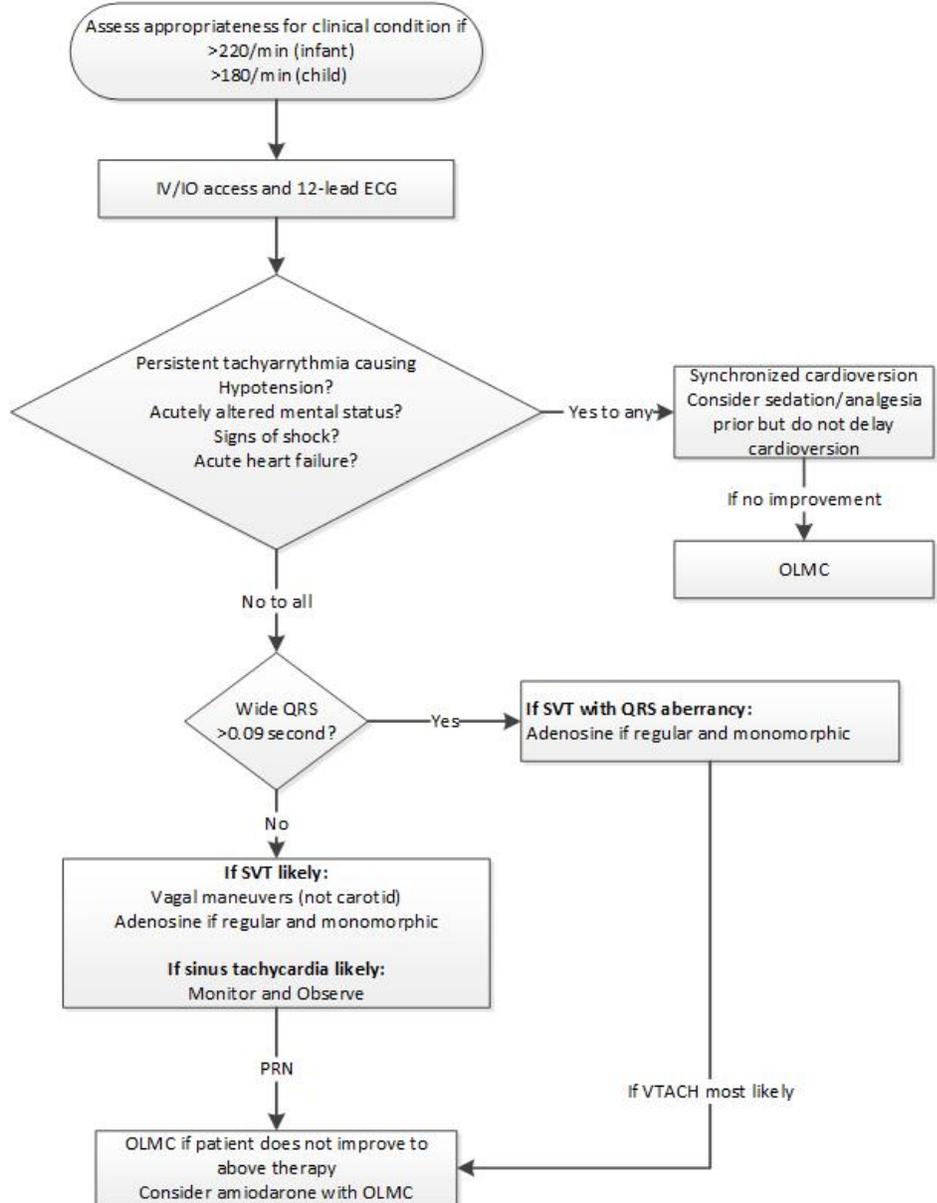
Midazolam 0.1 mg/kg max of 2 mg.
Fentanyl 0.5 to 1 mcg/kg max of 100 mcg.

Quality Improvement:

- Key Documentation Elements
1. Heart rate and rhythm changes
 2. Interventions
 3. Mental status or signs of instability

Patient Safety Considerations

Routine use of lights and sirens is not recommended during transport unless hemodynamically unstable





**General Medicine:
ALLERGIC REACTION
Medical Protocol**

Patient Care Goals:

1. Provide timely therapy for potentially life-threatening reactions to known or suspected allergens to prevent cardiorespiratory collapse and shock
2. Understand anaphylaxis is a spectrum disorder from mild to deadly symptoms; epinephrine is the life saving intervention; others are adjunctive.

Patient Presentation:

Inclusion Criteria

All ages with suspected allergic reactions even if they received an epi dose prior to arrival.

Quality Improvement:

- Key Documentation Elements
1. Time to epinephrine

Patient Safety Considerations:

1. Patients at high risk of death include:
 - Delayed epinephrine use
 - Received 2 total doses of epi
 - History of asthma
 - Patient on beta blockers
 - Inadequate resolution of symptoms
2. Cardiovascular collapse can be sudden and difficult to predict; hives/rash are not always present so do not rely on these findings if absent.

Paramedic Working Assessment: Allergic Reaction

Universal Care

- Any one of these with system findings with suspicion of allergic reaction:
- **Mouth/Upper Airway:** itching, sensation of swelling to lips/tongue/uvula/throat, hoarse voice, tightness, stridor, difficulty swallowing
 - **Lungs:** cough, shortness of breath, wheezing
 - **Cardiovascular:** hypotension, dizziness, faint pulse, syncope, feeling of doom
 - **GI:** vomiting, cramping
 - **Skin:** pallor, itching, hives, erythema

Epinephrine 1:1000 IM
 • 0.3 mg if 30 kg or over
 • 0.15 mg if under 30 kg
 Repeat in 5 minutes if no improvement

Dexamethasone 0.5 mg/kg
 Max dose of 16 mg

Diphenhydramine 1 mg/kg IM, IV, IO
 Max of 25 mg

SBP < 90 (or age defined criteria) or other shock criteria

Normal Saline Bolus 20 mL/kg

Shock continues

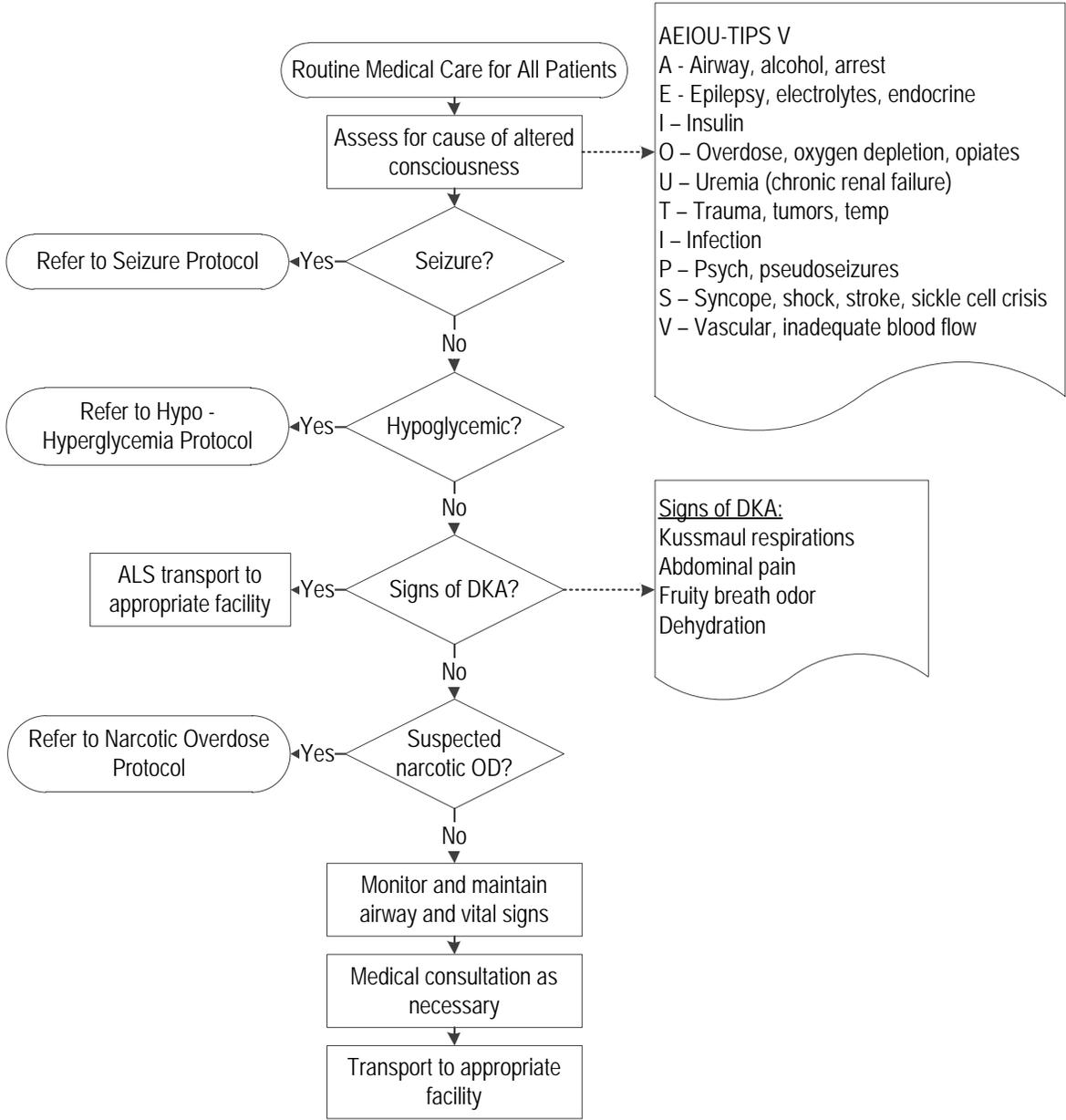
Norepinephrine Infusion
 PLUS
 Normal Saline Bolus

Plus any of these for special PRN circumstances

- Albuterol 5 mg / Ipratropium 0.5 mg nebulized – PRN
Wheezing
- Glucagon 1mg IM/IV/IN – PRN
Patients on beta blockers
- Epinephrine 1:1000 5 mg adult (2.5 mg if <40kg) nebulized – PRN
Stridor



**General Medicine:
ALTERED LEVEL OF CONSCIOUSNESS (LOC)
Practice Guideline**

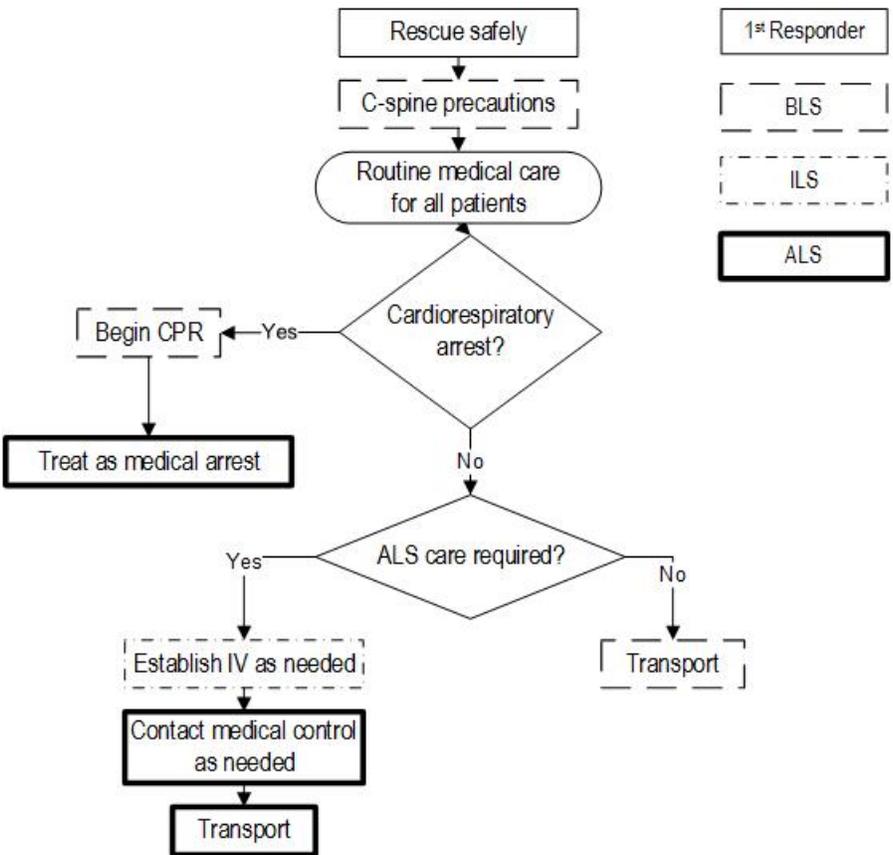


NOTES:

- If the patient is suspected of being unconscious due to a narcotic overdose, restraining the patient may be considered before administering naloxone.
- A 12-lead ECG should be obtained for all diabetic patients with atypical chest pain or abdominal pain or other symptoms that may be consistent with atypical presentation of angina or acute coronary syndrome.



**General Medicine:
HANGING
Practice Guideline**



NOTES:

- A patient in cardiorespiratory arrest is to be treated as a medical arrest and resuscitation is to be attempted at the scene.
- Attempt to determine and document accidental versus intentional injury, history of substance abuse and history of prior suicide attempts.
- Attempt to determine length of time patient was hanging.



**General Medicine:
HYPERKALEMIA
Medical Protocol**

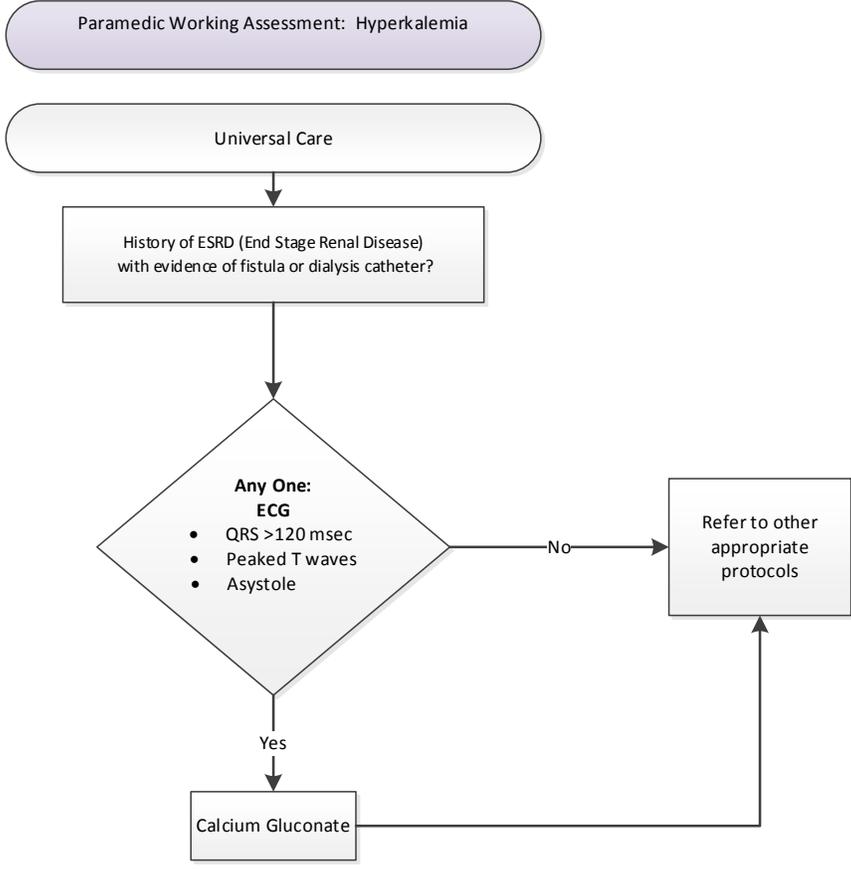
Patient Care Goals:
 1. Identify hyperkalemia may occur in various clinical settings such as cardiac arrest and bradycardia.
 2. Limit mortality from hyperkalemia
 3. Incorporate this protocol within other applicable protocols.

Patient Presentation:
Inclusion Criteria
 1. Patients with history of ESRD evidenced by a fistula or dialysis catheter with any one:
 • Wide QRS (>120 msec)
 • Bradycardia/Asystole
 • Peaked T waves

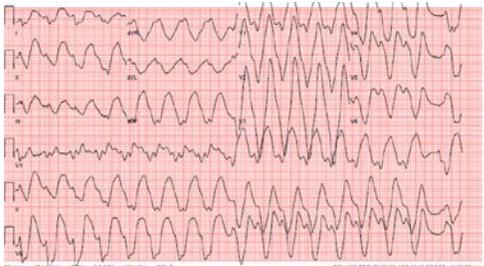
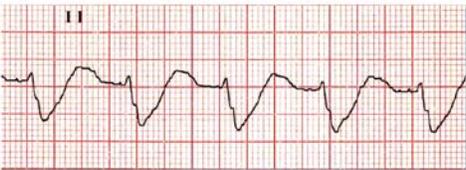
Calcium Gluconate 10% Treatment:
 60 mg/kg to a max of 3,000 mg (3 grams) IV/IO

Quality Improvement:
 Key Documentation Elements
 1. Evidence of ESRD (End Stage Renal Disease)
 2. Clinical indication for treatment.

Patient Safety Considerations
 Routine use of lights and sirens is not recommended during transport unless severe or refractory to EMS interventions



Examples of ECGs with peaked T waves and/or QRS > 120 msec:



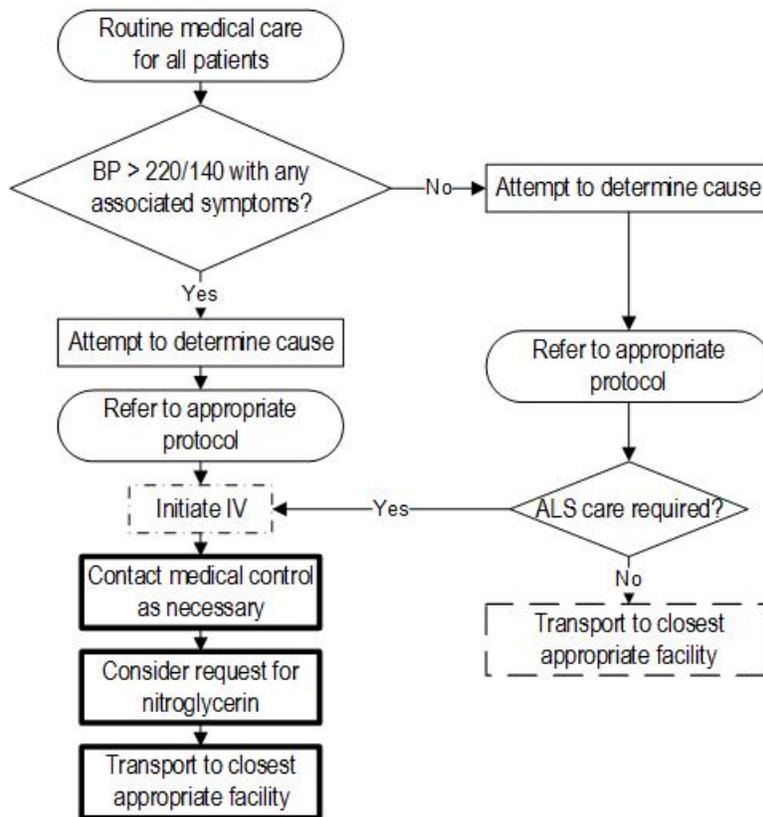
Initiated: 03/01/2018
 Reviewed/Revised:
 Revision

Approved: M. Riccardo Colella, DO, MPH, FACEP
 Reviewed: EMS Division Director Kenneth Sternig, RN
 WI DHS EMS Approval: 03/01/2018

Pg 1 of 1

**Cardiovascular:
HYPERTENSION
Practice Guideline**

History:		Signs/Symptoms:	Working Assessment:
History of hypertension Taking antihypertensives Pregnant Renal disease or on renal dialysis Cocaine use within the last 24 hours		Blood pressure above <u>220/140</u> and any of the following: Headache Dizziness Weakness Epistaxis Blurred vision Nausea, vomiting Seizure Altered level of consc.	Hypertensive crisis Eclampsia Cocaine induced hypertension



NOTES:

- Be sure to obtain multiple blood pressure readings.
- Treat the patient not the blood pressure.
- When considering request for nitroglycerin, be sure to determine if patient has used Viagra or Viagra-like medications within the last 24 hours.



**General Medicine:
HYPOGLYCEMIA / HYPERGLYCEMIA
Medical Protocol**

Patient Care Goals
Limit morbidity from hypoglycemia and hyperglycemia by:
1. Describing appropriate use of glucose monitoring
2. Treating symptomatic hypoglycemia
3. Appropriate hydration for hyperglycemia

Patient Presentation:
Inclusion Criteria
1. Adult or pediatric patient with blood glucose < 60 mg/dL with symptoms of hypoglycemia; infants < 40 mg/dL with symptoms of hypoglycemia
2. Adult or pediatric patient with altered level of consciousness
3. Adult or pediatric patient with stroke symptoms
4. Adult or pediatric patient with seizure
5. Adult or pediatric patient with symptoms of **DKA*** (dehydration, polyuria, polydipsia, nausea/vomiting, abdominal pain, weakness, dyspnea, dizziness, confusion, fruity-scented breath)
6. Adult or pediatric patient with history of diabetes and other medical symptoms
7. Patients with suspected alcohol ingestion

Medications:
Oral Glucose:
Adult Dosing: 15 gm q 5 mins x 3 PRN if symptomatic
Pediatric Dosing: 1 gm/kg (max of 15 gm/dose) q 5 mins x 3 PRN if symptomatic

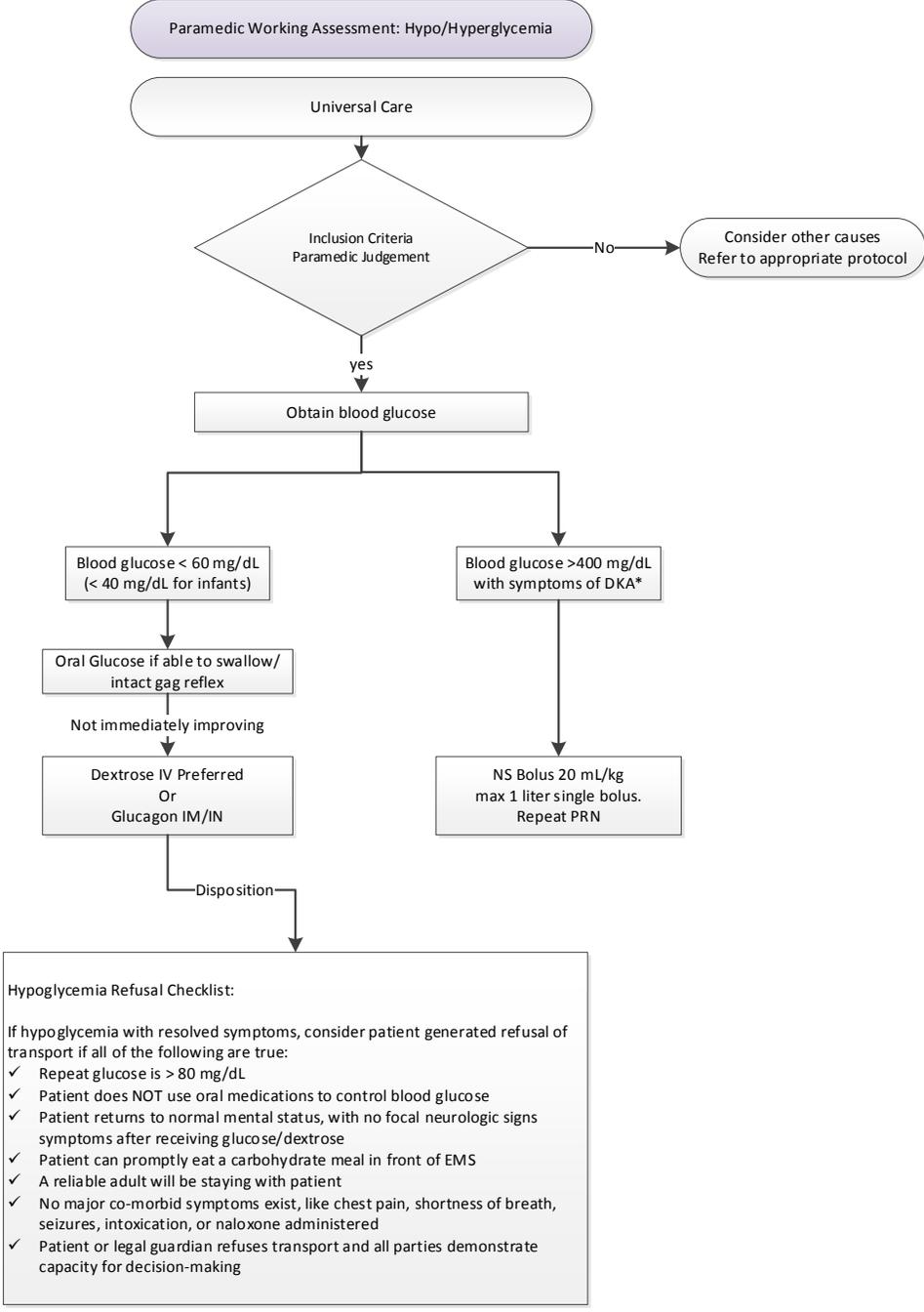
Dextrose IV
Adult Dosing: 100 mL 10% dextrose IV
Pediatric Dosing: 4 mL/kg of 10% dextrose IV (max 100 mL)
Dextrose may be repeated if patient remains symptomatically hypoglycemic PRN

Glucagon IM/IN
Adult and Pediatric Dosing: 1 mg IM/IN
Pediatric Dosing <20 kg: 0.5 mg IM/IN

Normal Saline Bolus
Glucose > 400 mg/dL with symptoms of DKA. Repeat PRN until symptom improvement, 3 boluses, or signs of heart failure/shortness of breath.

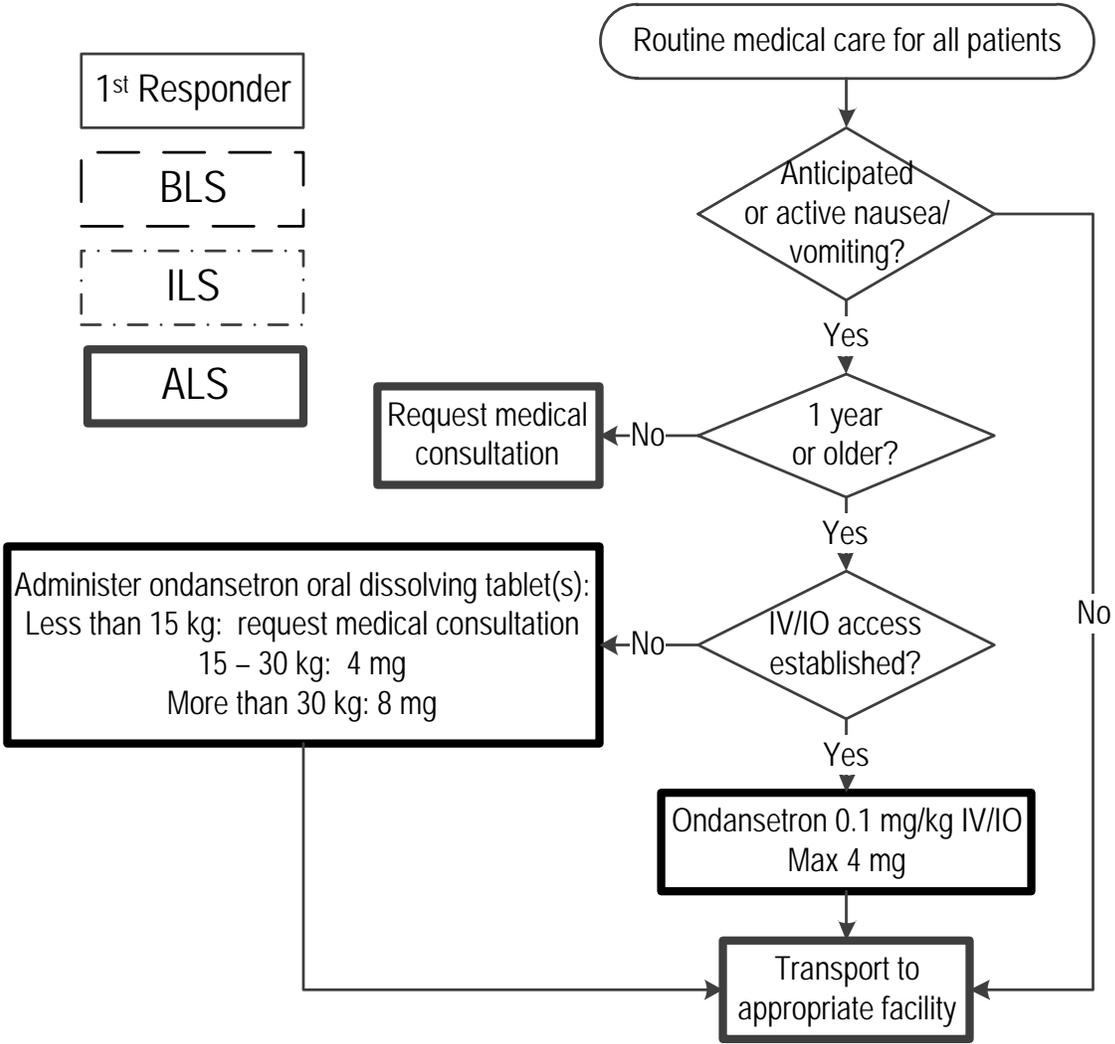
Quality Improvement:
Key Documentation Elements
1. Glucose measurements
2. Response to interventions
3. Hypoglycemia refusal for transport elements documented

Patient Safety Considerations
Patient refusals are high risk situations; use checklist. Routine use of lights and sirens is not recommended during transport unless severe or refractory to EMS interventions.





**General Medicine:
NAUSEA & VOMITING
Medical Protocol**



Notes:

- Goal is to prevent/reduce nausea/vomiting
- Ondansetron is contraindicated in patients with known prolonged QT complex:
 - Male – greater than 450 ms
 - Female – greater than 470 ms



**General Medicine:
PAIN MANAGEMENT
Medical Protocol**

Patient Care Goals:
 1. Compassionately manage all patients with pain.
 2. Minimize adverse events in the treatment of pain.

Patient Presentation:
Inclusion Criteria
 All patients with pain may benefit from non-pharmacological intervention.
 All patients with acute traumatic pain, cancer related pain, or sickle cell crisis with moderate or severe pain should be screened for analgesia administration.
 Paramedic clinical judgment for other conditions or situations.

Exclusion Criteria
 None

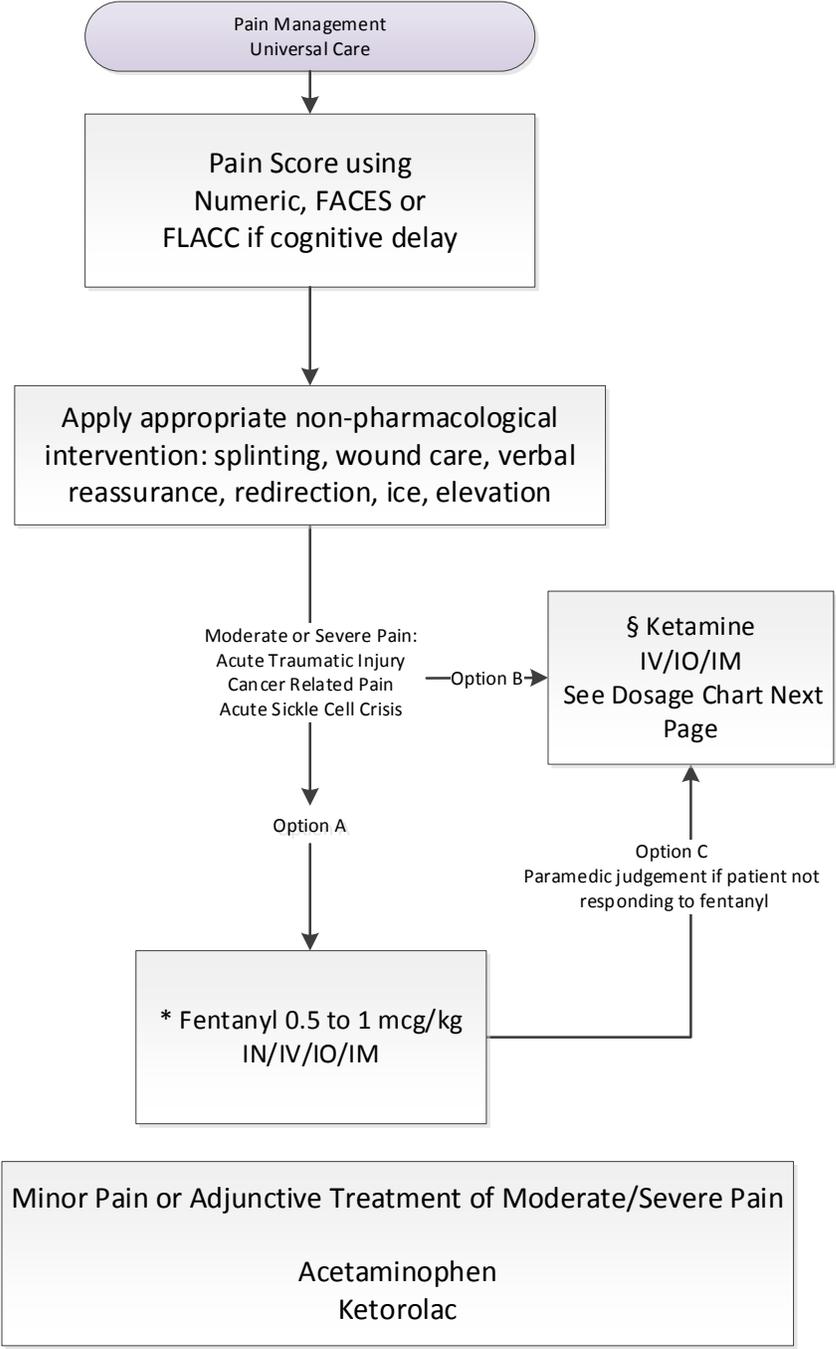
*** Fentanyl Treatment:**
 0.5 to 1 mcg/kg to a maximum initial single dose of 100 mcg.
 Repeat dosing up to a maximum subsequent dose of 100 mcg can be given every 10 minutes.
 Maximum cumulative dose of 300 mcg over duration of transport if needed.
 Provider judgement and patient response should guide dosing strategy; caution with hypotension.

§ Ketamine Treatment:
 0.1 mg/kg for IV/IO (must be diluted)
 0.3 mg/kg for IM (must be diluted)
 Dosing chart next page below for ease of dosing.
 May repeat q 10mins for a total of 3 doses.
 Ideal for painful EMS procedure, patients with hypotension or at risk for hypoventilation; PRN alternative to opioids.
 Dilution Instructions: 1 mL of ketamine (500 mg/5mL solution) in 9 mL of NS to yield a concentration of 10 mg/mL. Use smallest syringe where appropriate.

Minor Pain or Adjunctive Treatment:
Acetaminophen
 10 to 15 mg/kg max of 1,000 mg PO (can use tablets for larger patients)
Ketorolac
 0.5 mg/kg IV/IO Max of 10 mg
 1 mg/kg IM Max 60 mg

Quality Improvement:
 Key Documentation Elements
 1. Initial and re-occurring pain score (numeric, FACES or FLACC)
 2. Pulse Oximetry
 3. ETCO2 as directed
 4. Subsequent need for BVM or naloxone

Patient Safety Considerations:
 Non-invasive capnography to assess for hypoventilation as needed or directed; use escalation of stimulation, NPA/OPA airway adjunct, BVM and/or naloxone if hypoventilation occurs/continues.





Ketamine IV/IO Pain Management

	Patient Weight										
	<10 kg	10-19 kg	20-29 kg	30-39 kg	40-49 kg	50-59 kg	60-69 kg	70-79 kg	80-89 kg	90-99 kg	>100 kg
Ketamine IV/IO 0.1 mg/kg 500 mg/5mL, <i>diluted to 10mg/1mL**</i> <i>Note: mL listed here are after dilution, per protocol</i>	None	1 mg	2 mg	3 mg	4 mg	5 mg	6 mg	7 mg	8 mg	9 mg	10 mg
		0.1 ml	0.2 ml	0.3 ml	0.4 ml	0.5 ml	0.6 ml	0.7 ml	0.8 ml	0.9 ml	1 ml

****1 mL of ketamine (500 mg/5mL solution) in 9 mL of NS to yield a concentration of 10 mg/mL**

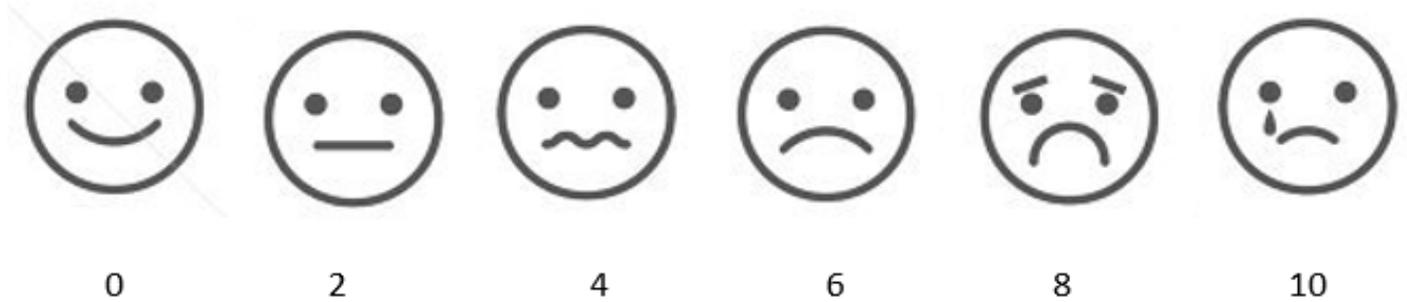
Ketamine IM Pain Management

	Patient Weight										
	<10 kg	10-19 kg	20-29 kg	30-39 kg	40-49 kg	50-59 kg	60-69 kg	70-79 kg	80-89 kg	90-99 kg	>100 kg
Ketamine IM 0.3 mg/kg 500 mg/5mL, <i>diluted to 10mg/1mL**</i> <i>Note: mL listed here are after dilution, per protocol</i>	1 mg	3 mg	6 mg	9 mg	12 mg	15 mg	18 mg	21 mg	24 mg	27 mg	30 mg
	0.1ml	0.3 ml	0.6 ml	0.9 ml	1.2ml	1.5 ml	1.8 ml	2.1 ml	2.4 ml	2.7 ml	3 ml

****1 mL of ketamine (500 mg/5mL solution) in 9 mL of NS to yield a concentration of 10 mg/mL**



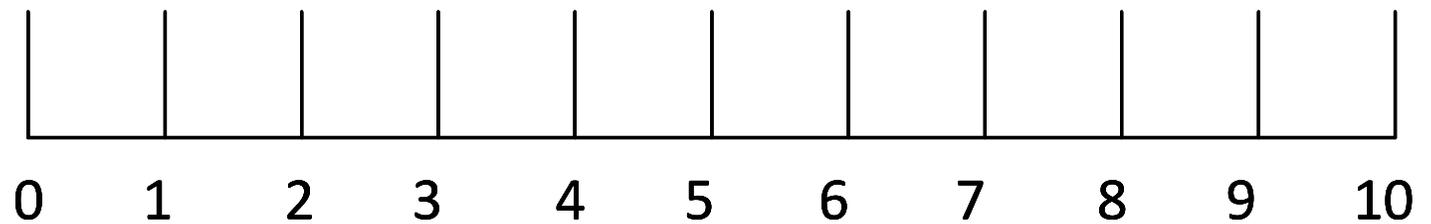
Faces Pain Scale



FLACC Pain Scale

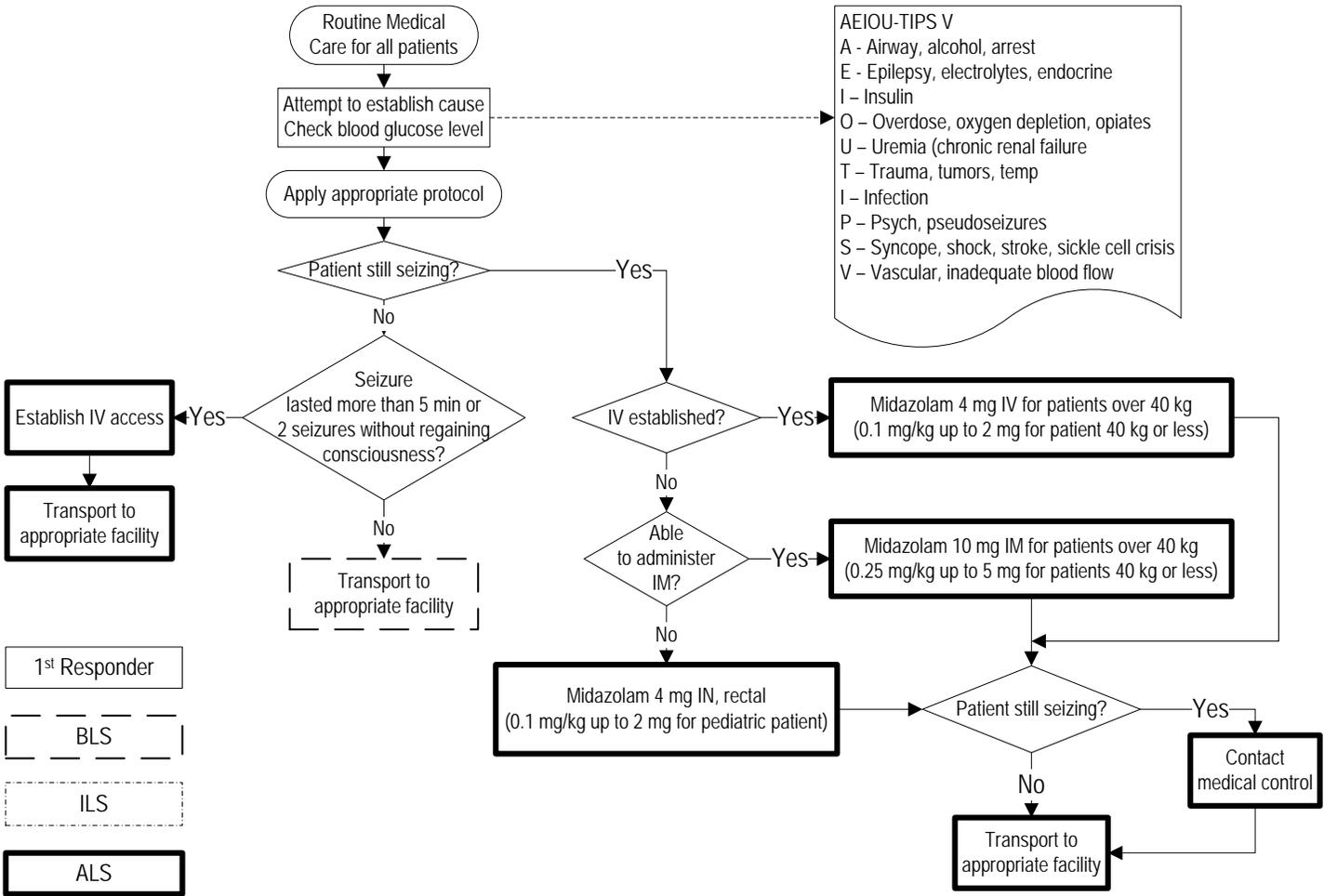
Criteria	Score = 0	Score = 1	Score = 2
Face	No particular expression or smile	Occasional grimace or frown, withdrawn, uninterested	Frequent to constant quivering chin, clenched jaw
Legs	Normal position or relaxed	Uneasy, restless, tense	Kicking, or legs drawn up
Activity	Lying quietly, normal position, moves easily	Squirming, shifting, back and forth, tense	Arched, rigid or jerking
Cry	No cry (awake or asleep)	Moans or whimpers, occasional complaint	Crying steadily, screams or sobs, frequent complaints
Consolability	Content, relaxed	Reassured by occasional touching, hugging, or being talked to, distractible	Difficult to console or comfort

Numeric Pain Scale





**General Medicine:
SEIZURE
Medical Protocol**



NOTE:

- Pediatric patients with febrile seizures rarely seize more than once. If patient seizes again, evaluate for another cause. Status Epilepticus is defined as a seizure lasting greater than 5 minutes **OR** two or more successive seizures without a period of consciousness or recovery



**General Medicine:
SEPSIS SYNDROME
Medical Protocol**

Patient Care Goals:
 1. Promptly identify patients at risk for cardiovascular decompensation from septic (distributive) shock.
 2. Heighten hospital awareness of a potential sepsis patient.

Patient Presentation:
Inclusion Criteria
 Patients with at least two systemic inflammatory response syndrome exam findings in context of a suspected infection.

Exclusion Criteria
 Other

Medications:
Acetaminophen
 Adult (≥40 kg): 1 gram PO
 Pediatric (<40kg): 10-15 mg/kg

Normal Saline Bolus
 30 mL/kg bolus IV/IO

Norepinephrine
 Adult (≥40 kg):
 8 to 12 mcg/min
 Refer to Medication List for infusion rate

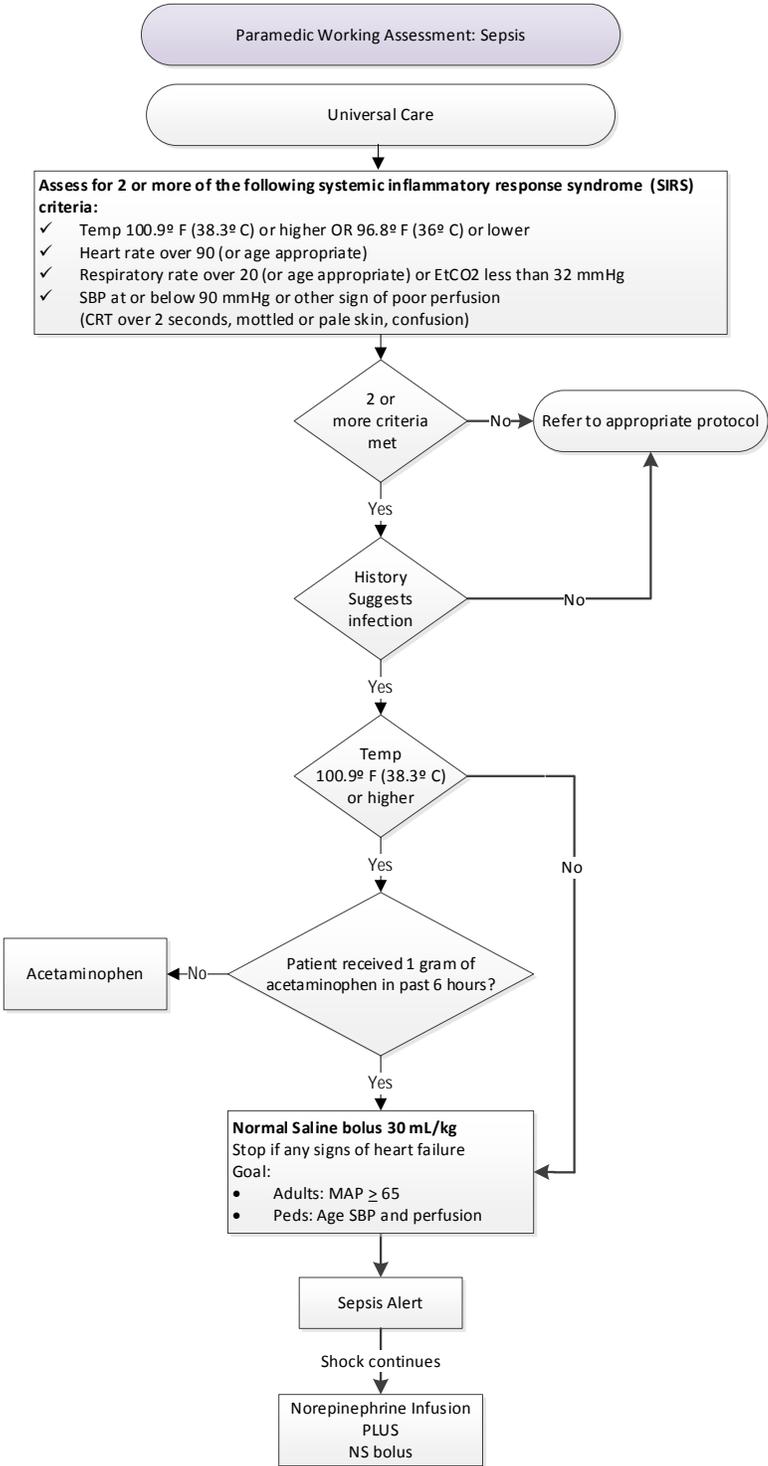
Pediatric (<40 kg):
 On Line Medical Control required
 Refer to Medication List for infusion rate

Quality Improvement:
 Key Documentation Elements
 1. Response to treatments and decision making for care escalation
 2. Time of Sepsis notification

Patient Safety Considerations
 Routine use of lights and sirens is not recommended during transport unless severe or refractory to EMS interventions.

MAP displays on ZOLL X-Series monitor. To calculate Mean Arterial Pressure (MAP):

$$MAP = \frac{SBP + 2(DBP)}{3}$$





**General Medicine:
SHOCK
Practice Guideline**

Patient Care Goals:

1. Initiate early fluid resuscitation and vasopressors to maintain/restore adequate perfusion to vital organs
2. Differentiate between possible underlying causes of shock in order to promptly initiate additional therapy

Patient Presentation:

Inclusion Criteria

1. Signs of poor perfusion such as one or more of the following:
Altered mental status
Delayed/flash capillary refill
Hypoxia
Decreased urine output
Respiratory rate greater than 20 in adults or elevated in children (see normal vital signs table)
Hypotension for age (lowest acceptable systolic blood pressure in mmHg):
 Less than 1 yo: 60
 1-10 yo: (age in years) (2)+70
 Greater than 10 yo: 90
Tachycardia for age, out of proportion to temperature
Weak, decreased or bounding pulses
Cool/mottled or flushed/ruddy skin

Treatment:

Underlying causes
Normal Saline Bolus (IV/IO) given over 10 mins...not slower; *sepsis uses 30 mL/kg dosing.
Norepinephrine infusion (see medication list for dosing)

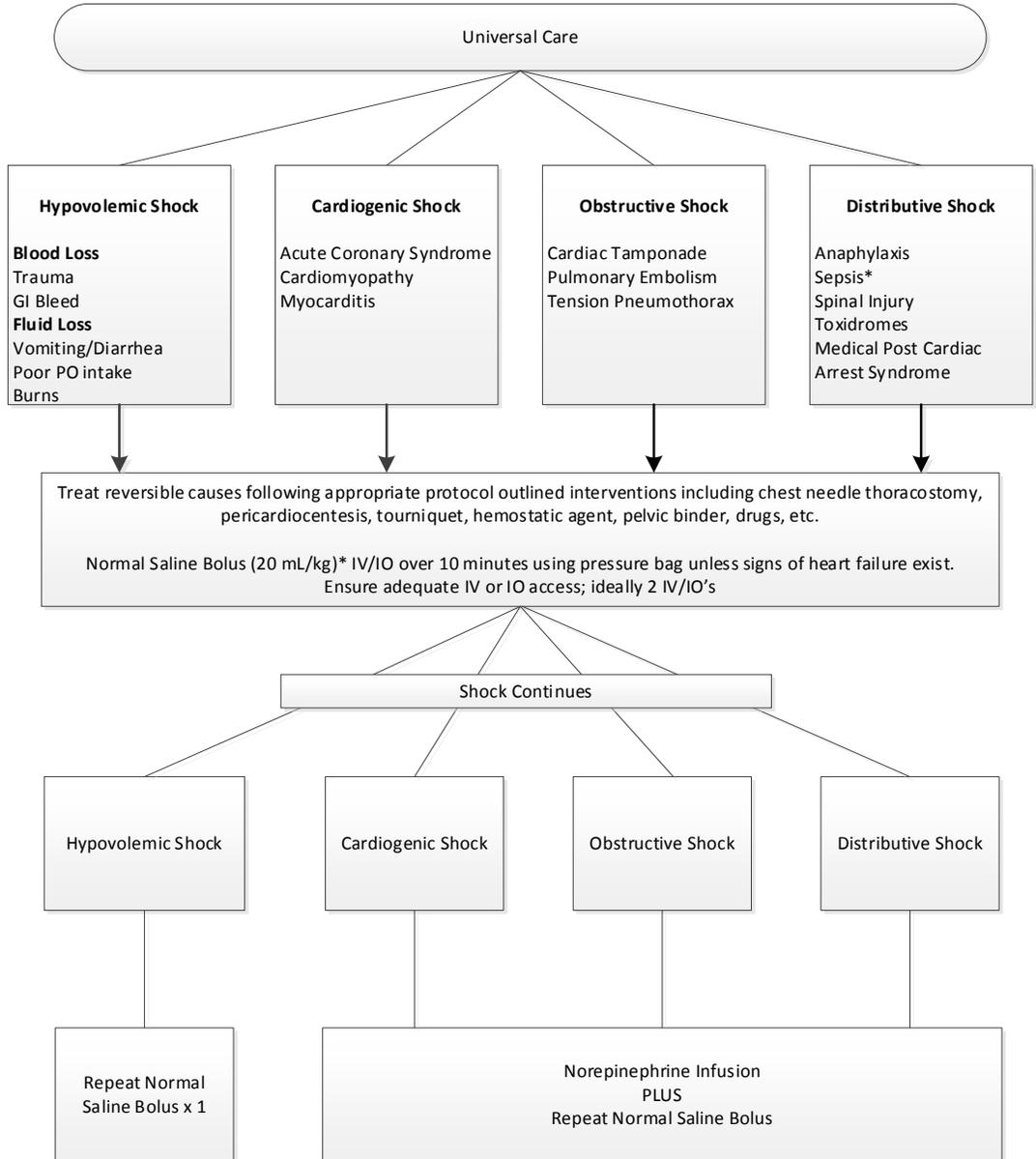
Quality Improvement:

Search for early (compensated) signs of shock.
IVF volume/rate and access type.
Use of a Sepsis Alert to receiving hospitals.

Patient Safety Considerations:

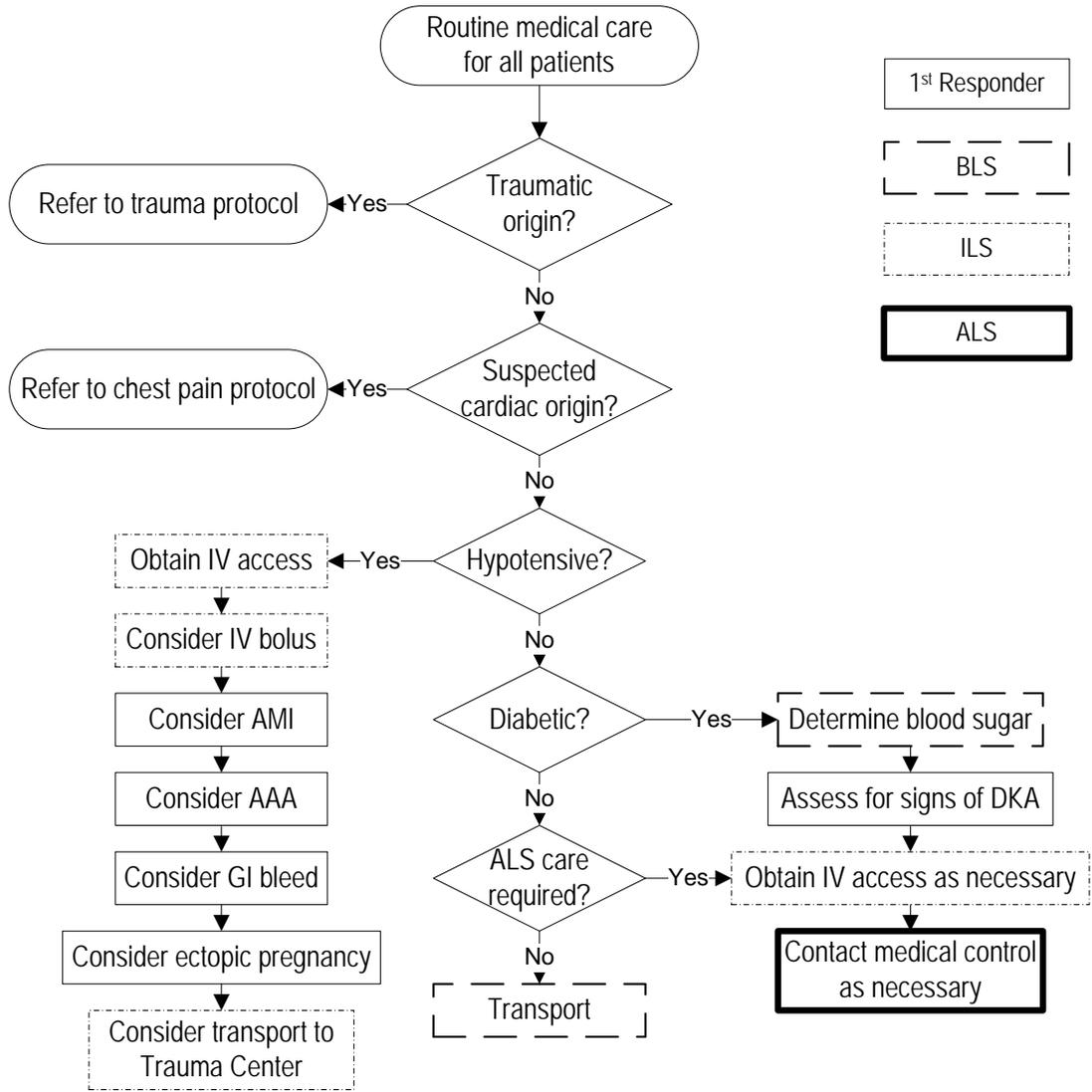
Recognition of cardiogenic shock - if patient condition deteriorates after fluid administration, rales or hepatomegaly develop, then consider cardiogenic shock and holding further fluid administration and begin norepinephrine infusion.

Paramedic Working Assessment: Shock General Causes





**GI / GU / GYN:
GASTROINTESTINAL / ABDOMINAL COMPLAINTS:
Practice Guideline**





**GI / GU / GYN:
OBSTETRICAL / GYNECOLOGICAL CONDITIONS:
Practice Guideline**

Patient Care Goals:

1. Recognize serious conditions associated with hemorrhage during pregnancy even when hemorrhage or pregnancy is not apparent (e.g. ectopic pregnancy, abruption placenta, placenta previa)
2. Provide adequate resuscitation for hypovolemia

Patient Presentation:

Inclusion Criteria

1. Female patient with vaginal bleeding in any trimester
2. Female patient with pelvic pain or possible ectopic pregnancy
3. Maternal age at pregnancy may range from 10 to 60 years of age

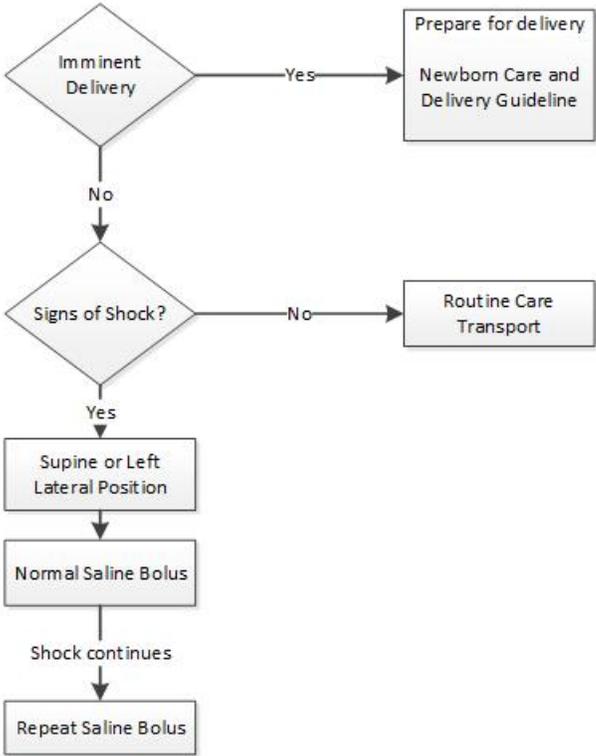
Normal Saline Bolus:
20 ml/kg NSS max single bolus 1000 ml

Quality Improvement:

Key Documentation Elements

1. Vital signs and response to treatment.
2. Estimated fundal height.

Patient Safety Considerations:
Left lateral position of symptomatic patient if in third trimester.
Do not place hand into bleeding vagina except in cases of breech or prolapsed cord delivery.





NOTES:

- Pregnant patients experiencing any of the following complications must be transported by ALS:
 - Excessive bleeding;
 - Amniotic fluid contaminated by fecal material;
 - Multiple births, premature imminent delivery;
 - Abnormal fetal presentation (breech);
 - Prolapsed umbilical cord.
- If the response time for an ALS unit *already requested* for a complication of pregnancy is longer than the transport time, the BLS unit may opt to load and go to the closest appropriate facility.
- Unstable newborns with a pulse less than 140 or flaccid newborns or with a poor cry are to be transported to the closest neonatal intensive care unit by an ALS unit.
- Patients at term should be transported on their left side, taking the pressure of the baby off the aorta and vena cava, improving circulation.
- Whenever possible, mother and newborn should be transported together to the same hospital, preferably where prenatal care was obtained.
- A patient at less than 24 weeks gestation will most likely be evaluated in the ED, not sent up to L&D. If the hospital where she received prenatal care is closed and the patient is at less than 24 weeks gestation, transport to an open ED.



**Universal Care:
MEDICATION LIST
Practice Guideline**

POLICY:

- All medications will be administered and documented as outlined in system policy.
- Concentrations and packaging of medications may change depending on availability; adjust volume administered to ensure proper dosing.
- IV/IO bolus should be administered over 10 seconds.
- Slow IV push should be administered over 1 – 2 minutes.

MEDICATION	USUAL ADULT DOSE	USUAL PEDS DOSE	ADMINISTRATION GUIDELINE	MONITOR, REPORT, DOCUMENT	INDICATIONS	CONTRAINDICATIONS
Acetaminophen 500 mg <i>tablets</i>	1 gram (2 tablets)	N/A	PO	Temperature	Sepsis Syndrome Pain Management- minor or adjunctive	Known liver disease Impaired swallowing
Acetaminophen <i>liquid</i> 160 mg in 5 mL	1 gram liquid preparation	10 to 15 mg/kg Max of 1,000 mg	PO	Temperature	Sepsis Syndrome Pain Management- minor or adjunctive	Known liver disease Impaired swallowing
Adenosine 12 mg in 4 mL	12 mg	1 st dose – 0.1 mg/kg 2 nd dose – 0.2 mg/kg Max dose 12 mg	Rapid IV, IO (most proximal preferred)	Continuous ECG Attempt to record conversion	Narrow complex tachycardia	Heart block Heart transplant Resuscitated cardiac arrest
Albuterol / Ipratropium 2.5 mg albuterol AND 0.5 mg ipratropium in 3 ml	5 mg albuterol / 1 mg ipratropium	2.5 mg albuterol / 0.5 mg ipratropium	Nebulized	Heart rate Change in respiratory status Age over 60 and cardiac History: ECG monitoring during administration	Respiratory distress Bronchospasm	Heart rate > 180

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Revision 5

Approved: M. Riccardo Colella, DO, MPH, FACEP
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**Universal Care:
MEDICATION LIST
Practice Guideline**

MEDICATION	USUAL ADULT DOSE	USUAL PEDS DOSE	ADMINISTRATION GUIDELINE	MONITOR, REPORT, DOCUMENT	INDICATIONS	CONTRAINDICATIONS
Amiodarone 150 mg in 3 mL <i>Cardiac Arrest ONLY</i>	300 mg; 150 mg for second dose	5 mg/kg for first dose, max of 300 mg; 5 mg/kg for second dose, max of 150 mg	IV, IO bolus	ECG changes Blood pressure	Cardiac arrest	2nd or 3rd degree AV block Bradycardia
Amiodarone 150 mg in 3 mL <i>Wide, irregular polymorphic tachycardia ONLY</i>	150 mg	Medical control consultation	Dilute in D5W IV, IO Infusion over 10 minutes	ECG changes Blood pressure	Wide, irregular polymorphic tachycardia	2nd or 3rd degree AV block Bradycardia Pregnancy
Aspirin 81 mg Chewable tablet	324 mg (4 tablets)	N/A	PO		Angina / acute coronary syndrome	Allergy
Atropine 1mg in 10 mL <i>Bradycardia</i>	0.5 mg	0.02 mg/kg Minimum dose 0.1 mg Max single dose 0.5 mg	IV or IO bolus	Heart rate Blood pressure ECG changes	Bradycardia	Tachycardia
Atropine 1mg in 10 mL <i>Anticholinergic Toxidrome</i>	2 mg	0.5 mg/kg Max single dose 2 mg	IV or IO bolus	Heart rate Blood pressure ECG changes	Anticholinergic toxidrome	
Calcium Gluconate 1g in 10 mL	3 g	60 mg/kg Max dose 3 g	IV or IO slow push	ECG changes Watch carefully for infiltration Bradycardia	Hyperkalemia	

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**Universal Care:
MEDICATION LIST
Practice Guideline**

MEDICATION	USUAL ADULT DOSE	USUAL PEDS DOSE	ADMINISTRATION GUIDELINE	MONITOR, REPORT, DOCUMENT	INDICATIONS	CONTRAINDICATIONS
Dexamethasone 20 mg in 5 mL	0.5 mg/kg Max dose 16 mg	0.5 mg/kg Max dose 16 mg	PO, IM, IV / IO slow push over 3-5 minutes	Pelvic itching	Croup Bronchospasm Allergic Reaction	
Dextrose 5% in Water 100 mL bag	Used to dilute amiodarone	Used to dilute amiodarone	IV, IO Diluent for amiodarone			
Dextrose 10% in Water 250 mL bag	100 mL	4 mL/kg Max 100 mL	IV or IO bolus	Changes in level of consciousness Repeat blood glucose Watch carefully for infiltration	Hypoglycemia	
Diphenhydramine 50 mg in 1 mL	25 mg	1 mg/kg Max dose 25 mg	IV or IO slow push IM	Changes in level of consciousness	Anaphylaxis	
Epinephrine 1:1000 -- 1 mg in 1 mL ANAPHYLAXIS	0.3 mg or adult auto injector	0.15 mg (less than 30 kg) or pediatric auto injector	IM, or auto injector (Vastus lateralis preferred site)		Anaphylaxis	No absolute contraindications in a life-threatening situation
Epinephrine 1:1000 -- 1 mg in 1 mL NEBULIZED	5 mg	2.5 mg (two point five mg)	Nebulized		Severe bronchiolitis Moderate croup Anaphylaxis	Caution with heart rate over 180
Epinephrine 1:10,000 -- 1 mg in 10 mL CARDIAC ARREST	1 mg	0.01 mg/kg Max dose 1 mg	IV or IO bolus		Cardiac arrest	

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**Universal Care:
MEDICATION LIST
Practice Guideline**

MEDICATION	USUAL ADULT DOSE	USUAL PEDS DOSE	ADMINISTRATION GUIDELINE	MONITOR, REPORT, DOCUMENT	INDICATIONS	CONTRAINDICATIONS
Fentanyl 100 mcg in 2 mL	0.5 - 1 mcg/kg Max single dose 100 mcg Max cumulative dose 300 mcg	0.5 – 1mcg/kg Max single dose 100 mcg Max cumulative dose 300 mcg	IV or IO slow push, IM, IN	Change in pain level Changes in respiratory rate and effort Capnography	Pain management	Respiratory depression Refractory hypotension
Glucagon 1 mg with 1 mL diluting solution	1 mg	0.5 mg if <20 kg; otherwise 1 mg	IM/IN	Level of consciousness Repeat blood glucose Vomiting	Hypoglycemia Anaphylaxis	
Glucose Gel 15g tube (oral)	15g PO q 5 mins x 3 doses PRN	1 gm/kg PO Max 15 gm/dose q 5 mins x 3 doses PRN	PO	Level of consciousness	Hypoglycemia	Lack of gag reflex
Hydroxocobalamin (CYANOKIT®)	5 g IV/IO drip	70 mg/kg Max dose 5 g	Reconstitute with 200 mL NS or D5W IV, IO infusion over 15 minutes	Blood pressure Nausea Headache Site reactions Rash	Suspected cyanide poisoning; enclosed smoke inhalation with unstable vital signs	Not routinely used during resuscitation until ROSC is obtained

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**Universal Care:
MEDICATION LIST
Practice Guideline**

MEDICATION	USUAL ADULT DOSE	USUAL PEDS DOSE	ADMINISTRATION GUIDELINE	MONITOR, REPORT, DOCUMENT	INDICATIONS	CONTRAINDICATIONS
Ketamine 500 mg in 5 mL <i>IV/IO ROUTE ONLY</i> <i>Patient Restraint</i>	1 mg/kg; max dose 100 mg	1 mg/kg; max dose 100 mg	IV, IO-Dilute 1ml of ketamine in 9 ml of NS = concentration of 10 mg/ml	Heart rate, Blood pressure Level of consciousness / hallucinations Capnography	Excited delirium; Immediate threat of harm to self or others	
Ketamine 500 mg in 5 mL <i>IM ROUTE ONLY</i> <i>Patient Restraint</i>	3 mg/kg Max dose 300 mg	3 mg/kg Max dose 300 mg	IM Do not dilute	Heart rate, blood pressure Level of consciousness / hallucinations Capnography	Excited delirium; Immediate threat of harm to self or others	
Ketamine 500 mg in 5 mL <i>IV/IO Route</i> <i>Post Airway Sedation</i>	0.3 mg/kg	0.3 mg/kg	IV/IO - Dilute 1ml of ketamine in 9 ml of NS = concentration of 10 mg/ml	Heart rate, Blood pressure Level of consciousness / hallucinations Capnography	Sedation following airway placement	
Ketamine 500 mg in 5 mL <i>IV/IO ROUTE ONLY</i> <i>Pain control</i>	0.1 mg/kg Use dosage chart on Pain protocol for ease of dosing.	0.1 mg/kg Use dosage chart on Pain protocol for ease of dosing.	IV/IO - Dilute 1ml of ketamine in 9 ml of NS = concentration of 10 mg/ml	Heart rate, Blood pressure Level of consciousness / hallucinations Capnography	Pain Management	
Ketamine 500 mg in 5 mL <i>IM ROUTE ONLY</i> <i>Pain control</i>	0.3 mg/kg Use dosage chart on Pain protocol for ease of dosing.	0.3 mg/kg Use dosage chart on Pain protocol for ease of dosing.	IM - Dilute 1ml of ketamine in 9 ml of NS = concentration of 10 mg/ml	Heart rate, Blood pressure Level of consciousness / hallucinations Capnography	Pain Management	

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**Universal Care:
MEDICATION LIST
Practice Guideline**

MEDICATION	USUAL ADULT DOSE	USUAL PEDS DOSE	ADMINISTRATION GUIDELINE	MONITOR, REPORT, DOCUMENT	INDICATIONS	CONTRAINDICATIONS
Ketorolac 30 mg in 1 mL	0.5 mg/kg IV/IO Max of 10 mg 1 mg/kg IM Max 60 mg	0.5 mg/kg IV/IO Max of 10 mg 1 mg/kg IM Max 60 mg Do not use for patients less than age 2	IV, IO, IM	Pain scale	Pain Management- minor or adjunctive	Other NSAID use within 6 hours Anticoagulation use GI bleed Known pregnancy Major bleeding
Lidocaine 100 mg in 5 mL	1 mg/kg Max dose 40 mg	1mg/kg Max dose 40 mg	IO slow push		Pain management for IO admin in conscious patient	Heart block Junctional arrhythmia Brady arrhythmia
Midazolam 5 mg in 5 mL <i>SEIZURE IV/IO/IN/PR</i>	> 40 kg 4 mg	< 40 kg 0.1 mg/kg Max 2 mg	IV, IO bolus	Changes in respiratory rate, effort, consciousness and seizure activity. Capnography	Seizure	Hypotension
Midazolam 5 mg in 5 mL <i>SEIZURE IM</i>	>40 kg 10 mg	<40 kg 0.25 mg/kg Max 5 mg	IM	Changes in respiratory rate, effort, consciousness and seizure activity. Capnography	Seizure	Hypotension
Midazolam 5 mg in 5 mL <i>CHEMICAL RESTRAINT</i>	1 to 2 mg	0.25 mg/kg Max 2 mg	IV, IM, IN	Changes in respiratory rate, effort, consciousness. Capnography	Patient Restraint Excited Delirium	
Midazolam 5 mg in 5 mL <i>Sedation post airway placement</i>	0.1 mg/kg Max 2 mg	0.1 mg/kg Max 2 mg	IV, IO	Capnography	Sedation post airway placement	

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**Universal Care:
MEDICATION LIST
Practice Guideline**

MEDICATION	USUAL ADULT DOSE	USUAL PEDS DOSE	ADMINISTRATION GUIDELINE	MONITOR, REPORT, DOCUMENT	INDICATIONS	CONTRAINDICATIONS
Naloxone 2 mg in 2 mL	0.5 mg	0.1 mg/kg Max single dose 0.5 mg	IV, IO, IM, IN	Changes in respiratory rate, effort, consciousness. Capnography	Narcotic overdose	
Nitroglycerin Metered spray canister – 0.4 mg/spray	0.4 mg to 1.2 mg per protocol	N/A	SL	Blood pressure prior to and after administration	Acute coronary syndrome CHF	SBP < 100 mm/hg Inferior STEMI Phosphodiesterase inhibitor within last 72 hours
Norepinephrine	Goal: MAP >65 mmHg Range: 8 to 12 mcg/min; start at 8 mcg/min and titrate 2 mcg/min every 5 mins to a max of 12 mcg/min. 8 mcg/min= 30 gtts/min; 10 mcg/min= 40 gtts/min; 12 mcg/min= 50 gtts/min	*OLMC required for pediatric Goal: Age appropriate normal systolic BP Range: 0.1 to 1 mcg/kg/min titrated every 5 mins to a max of 1 mcg/kg/min Dosing per weight for <40kg See NE drip chart at bottom of document.	IV/IO Mix 4 mg/4mL vial into 250cc bag of D5W or NS; deliver using micro drip tubing set (60 gtts/min/mL)		Non-hypovolemic shock refractory to fluid bolus.	Hypovolemic shock

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**Universal Care:
MEDICATION LIST
Practice Guideline**

MEDICATION	USUAL ADULT DOSE	USUAL PEDS DOSE	ADMINISTRATION GUIDELINE	MONITOR, REPORT, DOCUMENT	INDICATIONS	CONTRAINDICATIONS
Normal Saline 1000 mL, 500mL, 250mL bags	20 to 30 mL/kg based on specific protocol May repeat titrated to SBP >90 mm/Hg	20 mL/kg May repeat titrated to age appropriate SBP	Fluid bolus should be delivered in a pressure bag over 10 minutes	Respiratory distress	Shock states	Signs of heart failure
Ondansetron 4 mg oral dissolving tablets	8 mg	15 – 30 kg: 4 mg	PO (dissolving tablet)	Headache Dizziness	Nausea/ vomiting	Prolonged QT complex: Male: greater than 450 ms Female: greater than 470 ms
Ondansetron 2 mg/mL	0.1 mg/kg Max 4 mg	0.1 mg/kg Max 4 mg	IV, IO slow push	Headache Dizziness	Nausea/ vomiting	Prolonged QT complex: Male: greater than 450 ms Female: greater than 470 ms
Sodium Bicarbonate 50 mEq in 50 mL	50 mEq	1 mEq/kg Max 50 mEq	IV, IO bolus		As directed by OLMC	Do not mix with epinephrine or calcium gluconate.

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Norepinephrine Drip Rate Chart – based on standard premixed solution of 4 mg/250 mL of NS or D5W, using micro drip tubing (60 gtt/min/mL)

Patient weight ≥ 40kg (Not a weight based dose)

Start at 8mcg/minute and increase every 3 to 5 minutes with a max of 12mcg/minute.
Titrate to SBP of 90 mm/Hg

Dose (mcg/min)	8	10	12	
Drip rate (per minute)	30	40	50	Drips per minute

Patient weight <40kg (Weight based dosing; higher dosing than adults due to large volume of distribution in pediatrics)

****Medical Control needed prior to initiation of pediatric (<40 kg) norepinephrine****

Start at 0.1 mcg/kg/minute and increase every 3 to 5 minutes with a max of 1mcg/kg/minute
Titrate to age appropriate systolic blood pressure max of 90 mm/Hg

Weight kg		5	10	15	20	25	30	35	
Dose	0.1 mcg/kg/min	2	4	6	8	10	11	13	Drips per minute
Dose	0.5 mcg/kg/min	9	19	28	38	47	56	66	Drips per minute
Dose	1 mcg/kg/min	19	38	56	75	94	112	131	Drips per minute



Respiratory - Airway:
AIRWAY OBSTRUCTION - PEDIATRIC
Practice Guideline

Paramedic working assessment: Airway Obstruction-Pediatric

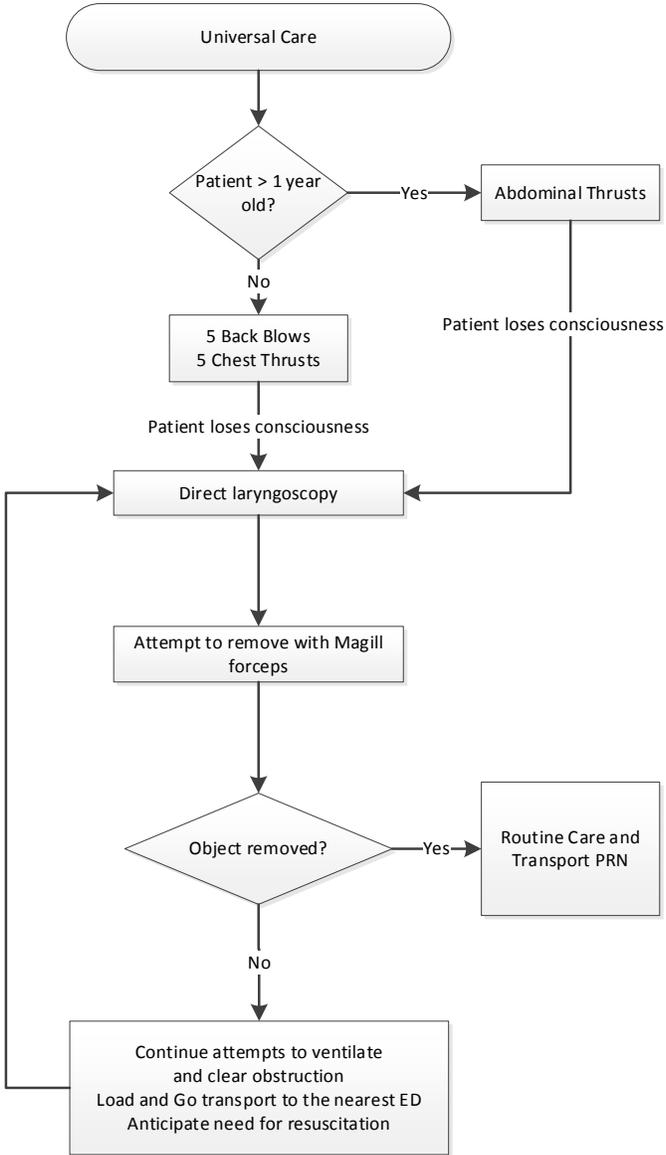
Patient Care Goals:
 1. Provide effective oxygenation and ventilation
 2. Recognize and alleviate airway obstruction and respiratory distress
 3. Identify a potentially difficult airway in a timely fashion

Patient Presentation:
Inclusion Criteria
 1. Signs of severe respiratory distress/obstruction
 2. Signs of hypoxemia or hypoventilation
 3. Stridor
 4. Stridor from presumed foreign body airway obstruction in child less than one year of age
Exclusion criteria
 Chronically ventilated patients
 Newborn patients (see Newborn care protocol)

Back Blows/Chest Thrusts/ Abdominal Thrusts
 Continue until airway is cleared or patient loses consciousness.

Quality Improvement:
 Key Documentation Elements
 1. Interventions, number of attempts
 2. Scene time if load and go scenario

Patient Safety Considerations
 Ongoing assessment is critical
 If unable to clear airway obstruction, unable to oxygenate, unable to ventilate, transport immediately to the nearest ED.



- NOTES:**
- Abdominal thrusts are no longer indicated in unconscious patients.
 - If unable to clear patient's airway, continue attempts to remove/ventilate and begin *immediate* transport to the closest most appropriate ED.
 - King LT-D insertion is not indicated in respiratory distress secondary to airway obstruction.

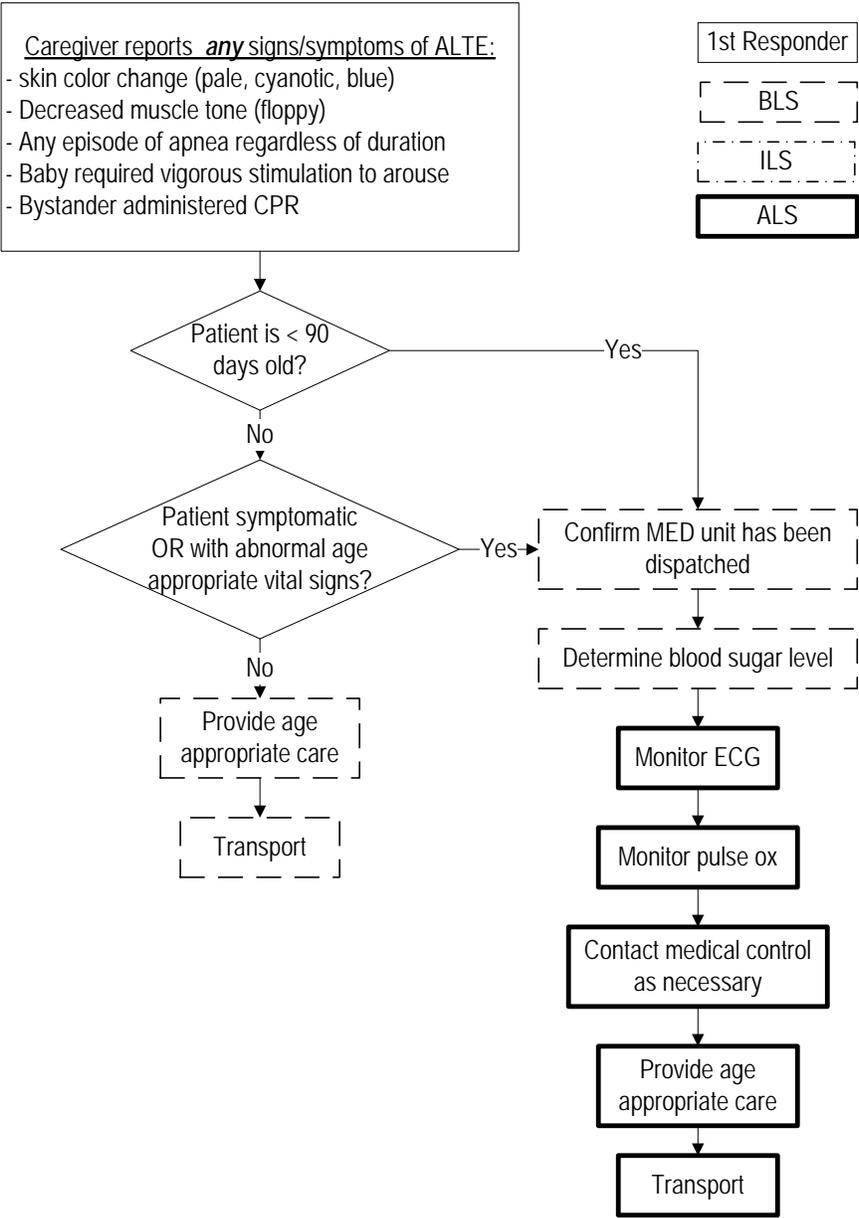
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**Pediatric Specific:
APPARENT LIFE THREATENING EVENT (ALTE):
Practice Guideline**



NOTES:

- Consider:
 - Respiratory infection GI reflux Seizure Premature birth
 - Drug exposure Shaken baby syndrome (child abuse) Cardiac arrhythmia



**Pediatric Specific:
BRADYCARDIA WITH PULSES - PEDIATRIC
Medical Protocol**

Patient Care Goals:

1. Maintain adequate perfusion
2. Restore regular sinus rhythm, correct rhythm disturbance if unstable
3. Search for underlying cause (hypoxia, shock, second or third degree AV block, toxin exposure)

Patient Presentation:

May present with symptoms such diaphoresis, dyspnea, chest pain, syncope/near syncope, hemodynamic instability, altered mental status

Inclusion Criteria

Heart rate <60

Exclusion criteria

No specific recommendations

Epinephrine:

0.01 mg/kg IV/IO q 3-5 min. Repeat as symptoms persist or decompensate.
Atropine 0.02 mg/kg (min of 0.1 mg single dose max of 0.5 mg single dose)

Transcutaneous pacing (TCP):

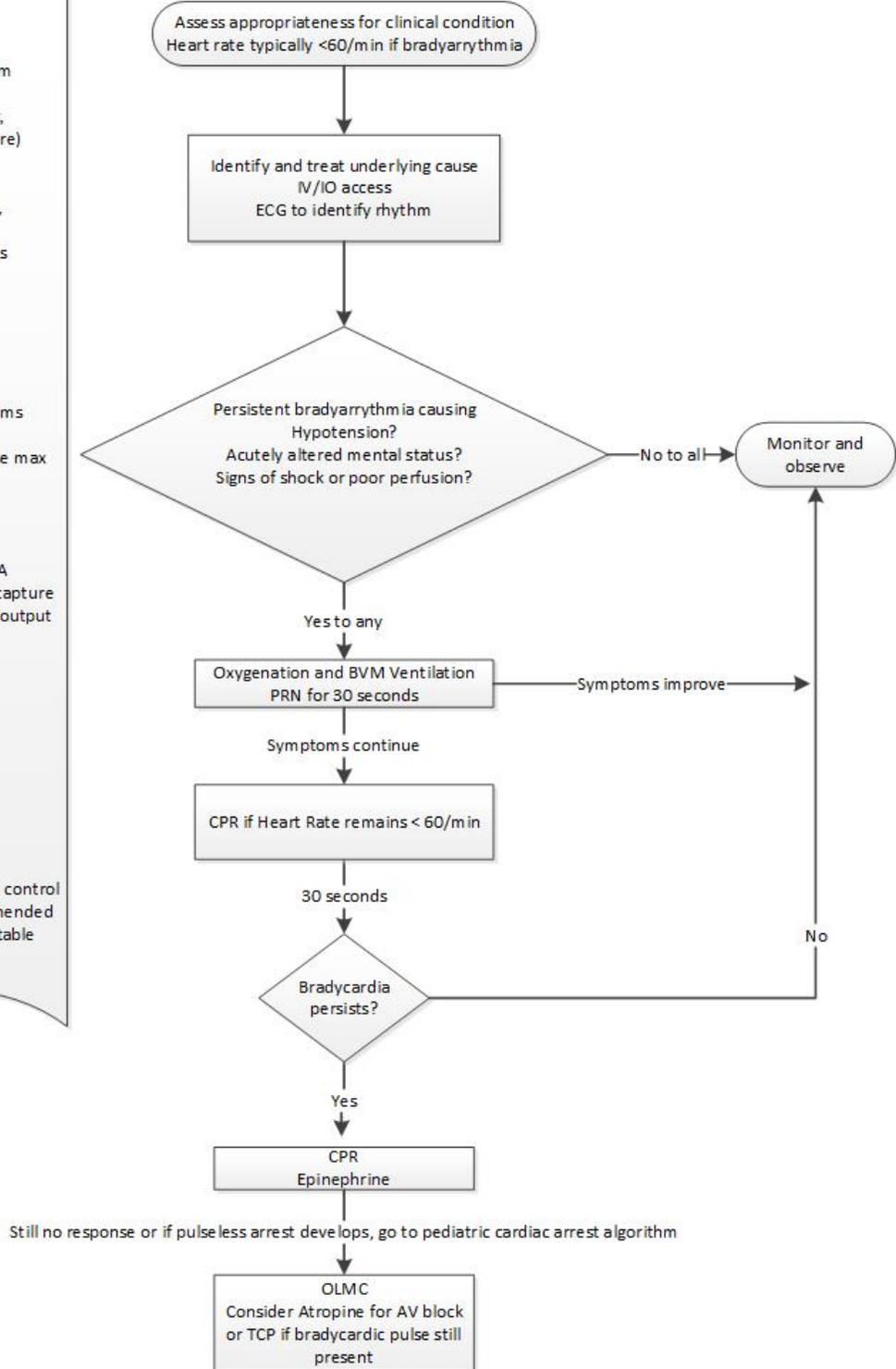
Place pads AP position.
Set pacer to fixed mode, Rate 70, output 50mA
Determine electrical capture and mechanical capture (right sided pulses), increase rate by 5 and/or output by 10mA to ensure/maintain capture

Quality Improvement:

- Key Documentation Elements
1. Heart rate and rhythm changes
 2. Interventions
 3. Mental status or signs of instability

Patient Safety Considerations

If pacing is performed, consider sedation/pain control
Routine use of lights and sirens is not recommended during transport unless hemodynamically unstable





**Respiratory - Airway:
BRONCHIOLITIS:
Medical Protocol**

Patient Care Goals:

1. To alleviate respiratory distress
2. To promptly identify respiratory distress, failure, and/or arrest, and intervene for patients who require escalation of therapy
3. To deliver appropriate therapy by differentiating other causes of pediatric respiratory distress
4. Score-Suction-Score...

Patient Presentation:

Inclusion Criteria
Child < age 2 with wheezing or diffuse rhonchi usually in setting of respiratory infection; usually first time wheezing illness.

Exclusion Criteria

1. Anaphylaxis
2. Croup
3. Epiglottitis
4. Foreign body aspiration
5. Submersion/drowning

Use of nebulized epinephrine:
Bronchiolitis Severity Score (BSS) \geq 10

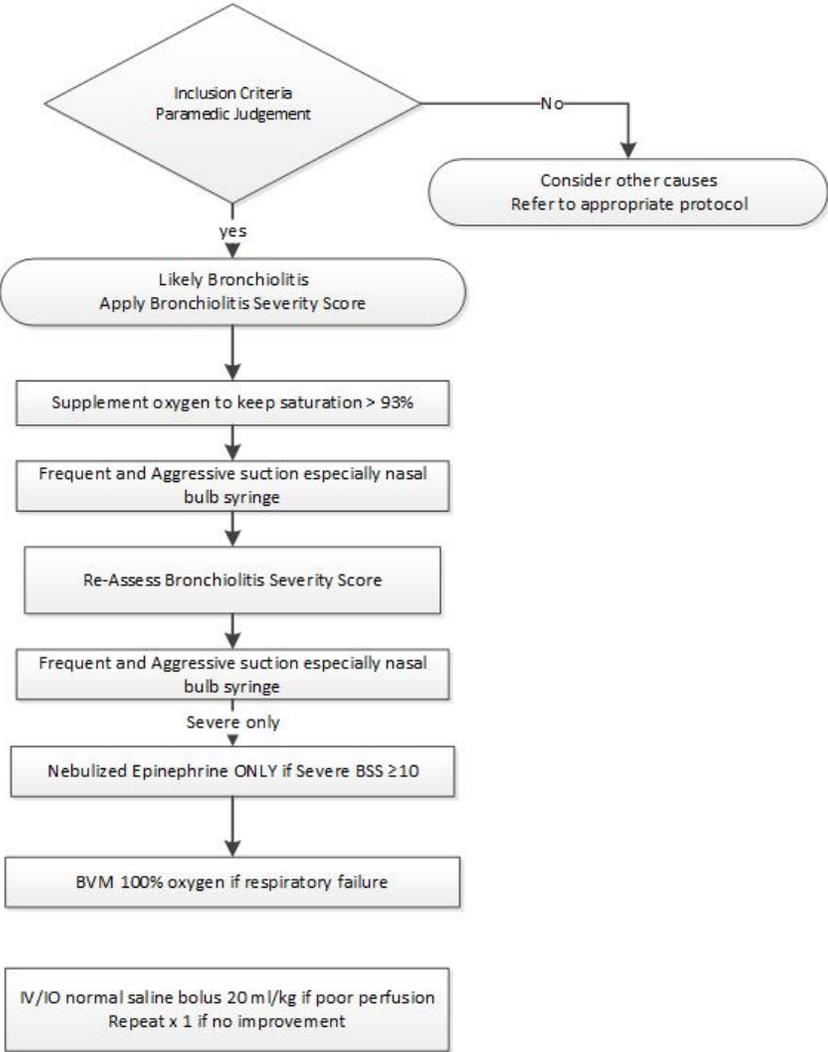
Nebulized Epinephrine:
2.5 ml of epinephrine 1:ONE thousand nebulized over 15 minutes

Quality Improvement:

Key Documentation Elements

1. Respiratory rate
2. Oxygen saturation
3. Use of accessory muscles
4. Breath sounds
5. Air entry
6. Mental status
7. Color
8. Bronchiolitis Severity Score

Patient Safety Considerations
Routine use of lights and sirens is not recommended during transport unless severe or refractory to EMS interventions





**Respiratory - Airway:
BRONCHIOLITIS:
Medical Protocol**

Modified Bronchiolitis Severity Score (≥10 is considered severe)

	Normal (0)	Mild (1)	Moderate (2)	Severe (3)
Respiratory Rate	<40	40-50	50-60	>60
SaO2 % RA	≥97%	96-94%	93-90%	<90%
General Appearance Calm/Console	Calm	+ Irritable Easy to console	++Irritable Difficult to console	+++ Irritable Unable to console
Retractions (SS, IC, SC) Nasal Flaring (NF)	None	Subcostal	Intercostal	Supraclavicular, Suprasternal, or Paradoxical
Auscultation	Clear	Scattered end expiratory wheeze or crackles	Diffuse expiratory wheeze or crackles	Insp/Exp wheeze or crackles; poor air movement; grunting



**Pediatric Specific:
CARDIAC ARREST – PEDIATRIC (MEDICAL)
Practice Guideline**

Patient Care Goals:

1. Return of Spontaneous Circulation (ROSC)
2. Preservation of neurologic function

Patient Presentation:

Inclusion Criteria:

Pediatric patient without palpable pulses

Exclusion Criteria:

Patients with valid DNR/POLST order
 Obvious death as defined as: decapitation, rigor mortis, dependent lividity, decomposition, full thickness burns >90% of body, hypothermia with rigid airway or ice formation in airway
 Obvious traumatic etiology (see Traumatic Cardiac Arrest practice guideline)

Defibrillation:

Anterolateral pad placement, biphasic dose 2 J/kg first shock; 4 J/kg subsequent shocks to maximum single shock dose of 200 Joules

Resume compressions immediately after shock

Refractory Vfib/Vtach (defined as persistent rhythm not responding to loading dose of amiodarone, and 3 defibrillation attempts from any device):

Limit Epinephrine to 3 doses while refractory. Apply second pad in the anterior/posterior orientation and deliver remaining shocks in this orientation.

Medications:

Epinephrine 1:TEN THOUSAND 0.01 mg/kg (max of 1 mg per dose) q3-5 min IV/IO
 Amiodarone IV/IO, 5 mg/kg bolus; may repeat same bolus dose after 8-10 min.
 NS bolus 20 mL/kg pressure bag over 5 mins; repeat X 1 if no ROSC.

Advanced Airway:

King airway

Quality Improvement:

Push hard (> 1/3 AP diameter of chest) and fast (100-120/min).
 Minimize interruptions in compressions.
 Rotate compressors every 2 minutes.
 Avoid excessive ventilation (1 breath every 6 seconds).
 Capnography.

Key Documentation elements:

Times of resuscitation and all interventions
 Witnessed?
 Bystander CPR?
 Initial rhythm shockable/first monitored rhythm?
 Any ROSC

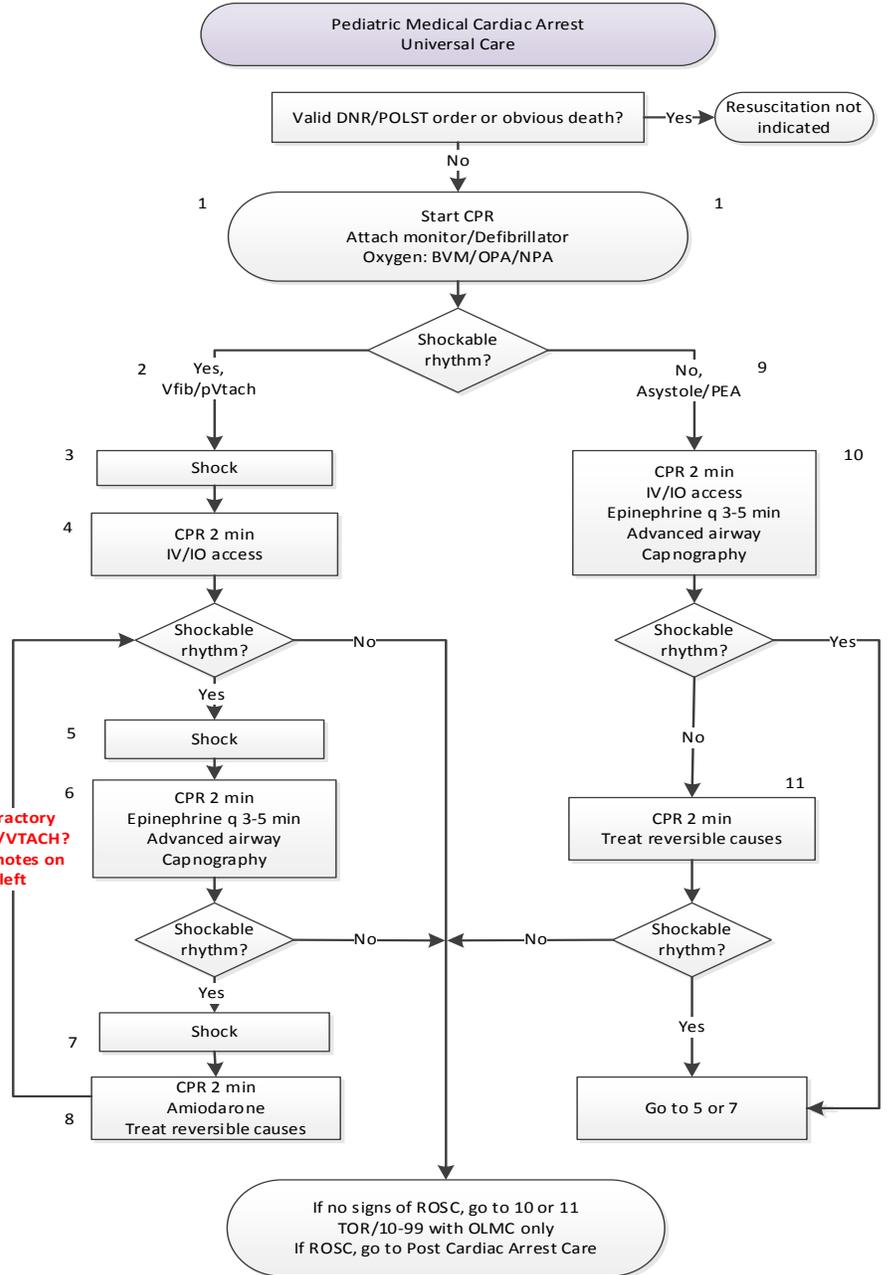
TOR/10-99 criteria with OLMC

- OLMC should be involved with TOR decision; factors likely to favor TOR include:
- Cardiac arrest not witnessed by EMS Provider
 - Continuous asystole throughout resuscitation attempt
 - Not believed related to environmental hypothermia
 - Patent airway
 - High quality CPR
 - 15 minute resuscitation effort EtCO₂ 10 mmHg or less
 - Clinical death exam positive

Safety Considerations:

Transport of patients with ongoing resuscitation may arise in certain circumstances such as submersion, thoracic penetrating trauma arrest, or refractory vfib/vtach; a mechanical CPR device is encouraged.

Refractory V FIB/VTACH?
See notes on left



Call early OLMC immediately if unclear DNR/POLST or if patient pregnant >20 weeks. Contact OLMC after beginning aggressive resuscitation. Do not delay initial resuscitation.

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**Pediatric Specific:
CROUP:
Medical Protocol**

Patient Care Goals:

1. To alleviate respiratory distress
2. To promptly identify respiratory distress, failure, and/or arrest, and intervene for patients who require escalation of therapy
3. To deliver appropriate therapy by differentiating other causes of pediatric respiratory distress

Patient Presentation:

Inclusion Criteria
Suspected Croup (history of stridor or history of barking cough); setting of URI; Boys > Girls; 3 to 36 months most common but can occur in older groups.

Exclusion Criteria
Presumed underlying cause that includes one of the following:

1. Anaphylaxis
2. Asthma
3. Bronchiolitis (wheezing <2 years of age)
4. Foreign body aspiration
5. Submersion/drowning

Use of nebulized epinephrine or dexamethasone:
Croup Severity Score \geq (4)

Nebulized Epinephrine:
2.5 mg (2.5 ml) of epinephrine ONE-to- ONE-thousand nebulized

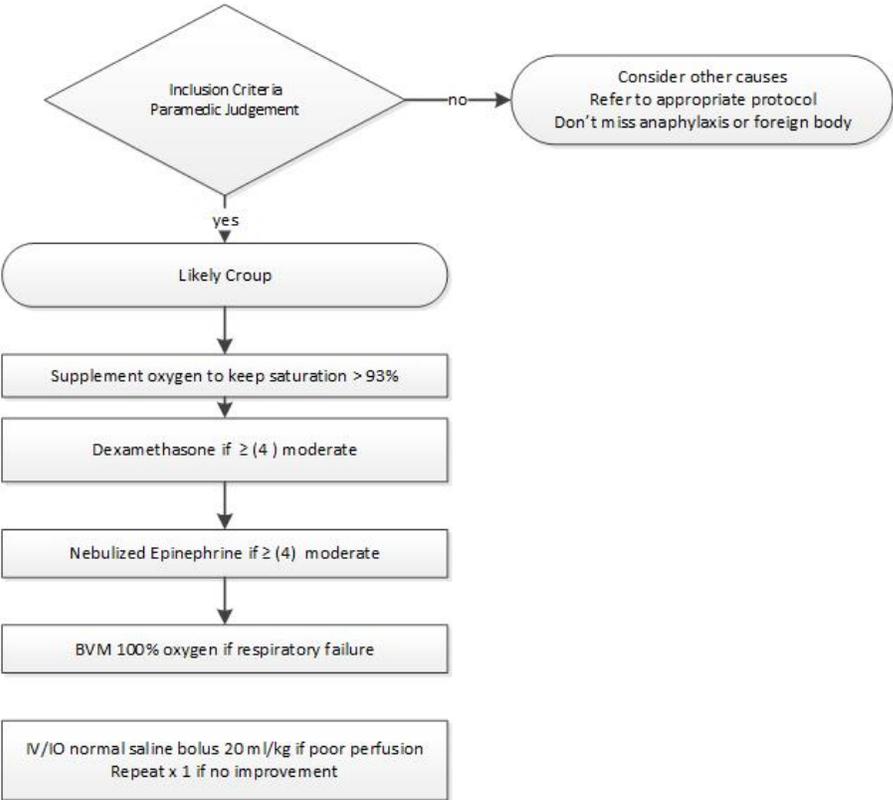
Dexamethasone
0.5 mg/kg oral, IV, or IM to max dose of 16 mg

Quality Improvement:

Key Documentation Elements

1. Respiratory rate
2. Oxygen saturation
3. Use of accessory muscles
4. Breath sounds
5. Air entry
6. Mental status
7. Color
8. Croup Severity Score

Patient Safety Considerations
Routine use of lights and sirens is not recommended during transport unless severe or refractory to EMS interventions



****Croup Severity Score on next page****



**Pediatric Specific:
CROUP:
Medical Protocol**

Modified Croup Severity Score (4 is moderate croup severity)

Level of Consciousness	
Normal	0
Disoriented	5
Cyanosis	
None	0
With Agitation	4
At Rest	5
Stridor	
None	0
With Agitation	1
At Rest	2
Air Entry	
Normal	0
Decreased	1
Markedly Decreased	2
Retractions	
None	0
Mild	1
Moderate	2
Severe	3



**Pediatric Specific:
NEWBORN CARE ASSESSMENT:
Practice Guideline**

Patient Care Goals:

1. Provide routine care to the newly born infant
2. Perform a neonatal assessment
3. Rapidly identify newly born infants requiring resuscitative efforts
4. Provide appropriate interventions to minimize distress in the newly born infant
5. Recognize the need for additional resources based on patient condition and/or environmental factors

Patient Presentation:

Inclusion Criteria
Newly born infants

Exclusion criteria
Documented gestational age <20 weeks (if any doubt about accuracy of gestational age, initiate resuscitation)

Oxygen administration:
Provide blow-by oxygen as needed
BVM with room air at 40-60 breaths/min
Primary indicator of effective ventilations is HR
If no improvement after 90 sec on room air, increase oxygen to 100% FIO2 until HR normalizes

Chest Compressions:
Two-thumb-encircling hands technique is preferred
Coordinate compressions and BVM (3:1 ratio, 90 compressions and 30 breaths per minute)

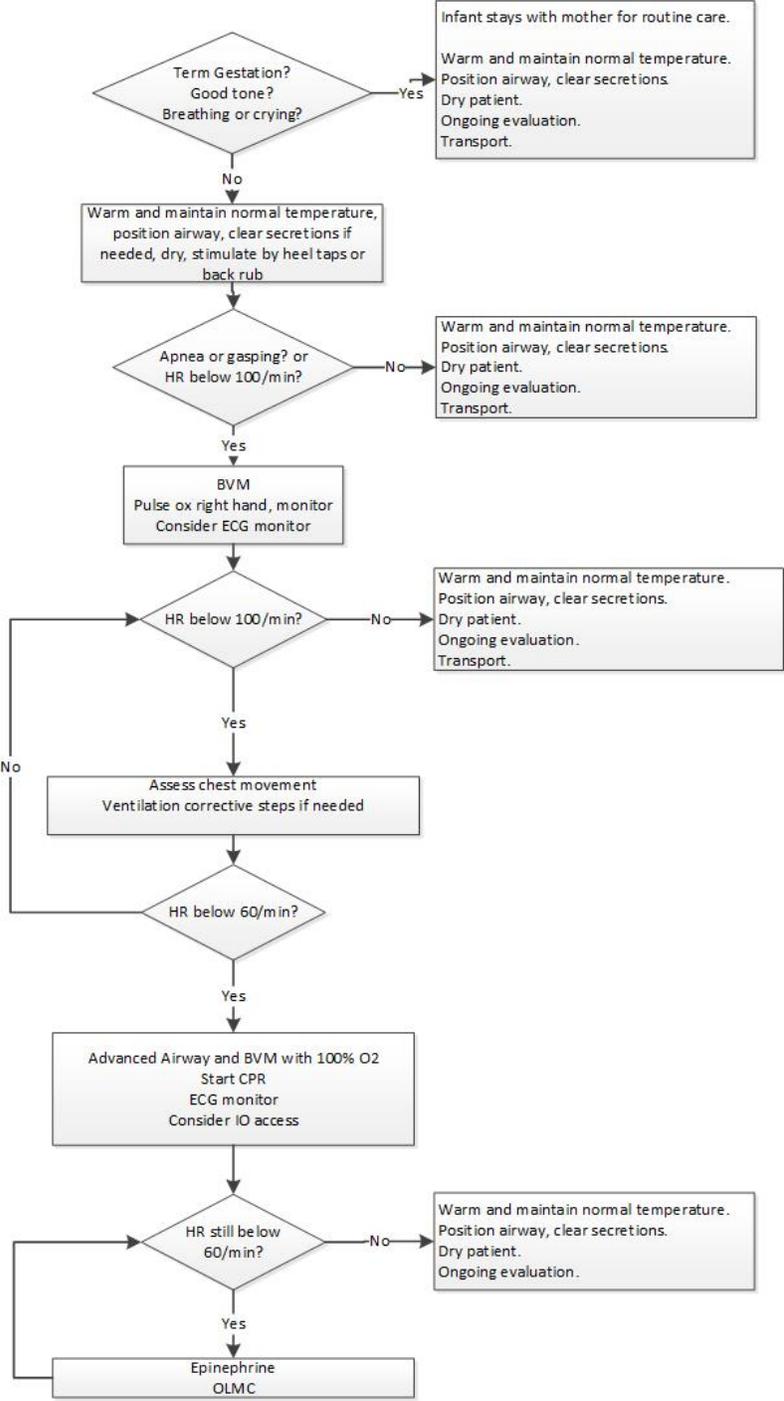
Target Preductal (R hand) O2 saturation after birth:
1 min: 60-65%
5 min: 80-85%
10 min: 85-95%

Epinephrine
0.01 mg/kg max of 1mg; may repeat q 3 to 5 min PRN.

Quality Improvement:
Key Documentation Elements

1. Date and time of birth
2. History (prenatal, birth/delivery complications)
3. Estimated gestational age
4. HR (precordium, brachial, or umbilical stump)
5. Muscle tone, appearance, color, APGAR
6. Interventions

Patient Safety Considerations
Hypothermia is common, ensure heat retention at all times by drying thoroughly, wrapping in dry cloth or if stable and not impeding care, skin to skin warming
Routine use of lights and sirens is not recommended during transport unless hemodynamically unstable





**Pediatric Specific:
TACHYCARDIA WITH PULSES – PEDIATRIC
Medical Protocol**

Patient Care Goals:

1. Maintain adequate oxygenation, ventilation, and perfusion
2. Restore regular sinus rhythm, correct rhythm disturbance if unstable
3. Search for underlying cause (medications, drugs, CHF, history of dysrhythmia)

Patient Presentation:

May present with symptoms such as palpitations, dyspnea, chest pain, syncope/near syncope, hemodynamic instability, altered mental status

Inclusion Criteria

Heart rate >220/min (infant) or >180/min (child)

Exclusion criteria

Sinus tachycardia

Adenosine:

Adenosine 0.1 mg/kg (max single doses of 6 mg) IV followed immediately by rapid 10ml flush of NSS. May repeat one additional dose at 0.2 mg/kg (max single dose of 12 mg) if no improvement within 5 minutes.

Amiodarone:

5 mg/kg IV infusion over 30 minutes (max dose of 150 mg).

Synchronized Cardioversion:

AP Pad Placement
1 J/kg initially; 2 J/kg for subsequent doses.

Sedation/Analgesia PRN stability:

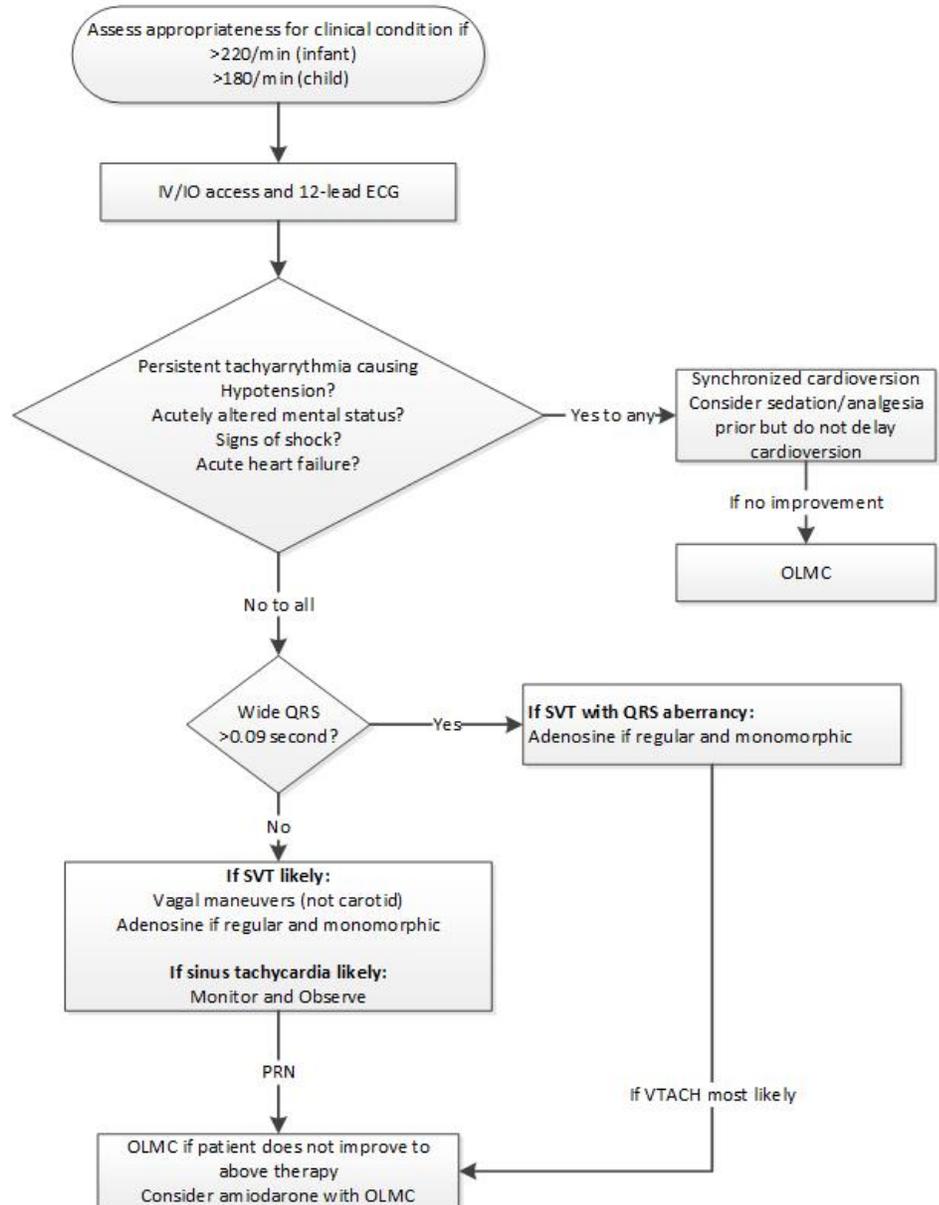
Midazolam 0.1 mg/kg max of 2 mg
Fentanyl 0.5 to 1 mcg/kg max of 100 mcg.

Quality Improvement:

- Key Documentation Elements
1. Heart rate and rhythm changes
 2. Interventions
 3. Mental status or signs of instability

Patient Safety Considerations

Routine use of lights and sirens is not recommended during transport unless hemodynamically unstable





**Respiratory - Airway:
AIRWAY MANAGEMENT
Practice Guideline**

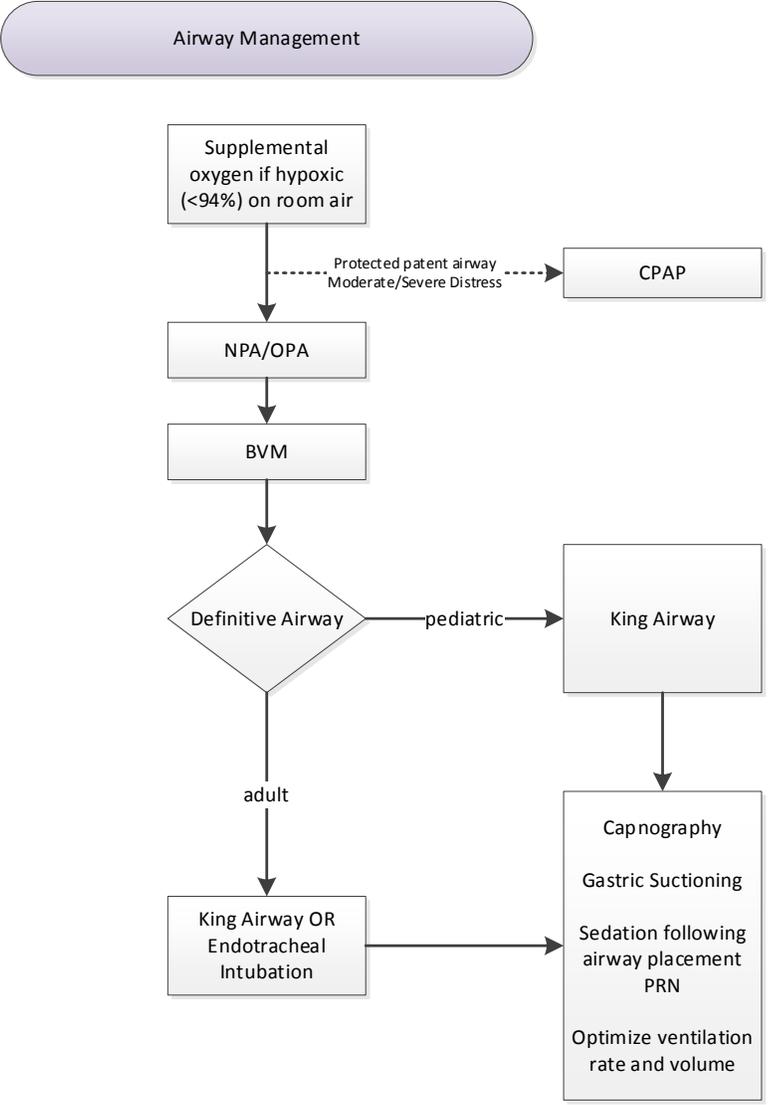
Patient Care Goals:
 1. Recognize and alleviated respiratory distress.
 2. Provide effective oxygenation and ventilation through support interventions.

Patient Presentation:
Inclusion Criteria
 Signs of severe respiratory distress or failure. Patients with hypoxemia or hypoventilation.
Exclusion Criteria
 Patients who improve with supplemental oxygen or other interventions.

Treatment:
 CPAP for moderate to severe respiratory distress. NPA/OPA for anyone with impaired protective reflexes. BVM for hypoventilation or respiratory failure; insert 2 NPA's and OPA when using BVM to assist effectiveness of ventilations. Definitive airway as suggested. If ET is used, no more than 2 ET attempts per patient ensure no hypoxia between attempts. Post airway insertion includes continuous capnography, securing with commercial device, gastric suctioning and sedation PRN. Avoid hyperventilation.

Quality Improvement:
 Key Documentation Elements
 ETCO2 confirmation AND monitoring

Patient Safety Considerations:
 Capnography is a critical safety tool in patients with an advanced airway.





Respiratory - Airway:
AIRWAY OBSTRUCTION - PEDIATRIC
Practice Guideline

Paramedic working assessment: Airway Obstruction-Pediatric

Patient Care Goals:

1. Provide effective oxygenation and ventilation
2. Recognize and alleviate airway obstruction and respiratory distress
3. Identify a potentially difficult airway in a timely fashion

Patient Presentation:

Inclusion Criteria

1. Signs of severe respiratory distress/obstruction
2. Signs of hypoxemia or hypoventilation
3. Stridor
4. Stridor from presumed foreign body airway obstruction in child less than one year of age

Exclusion criteria

Chronically ventilated patients
 Newborn patients (see Newborn care protocol)

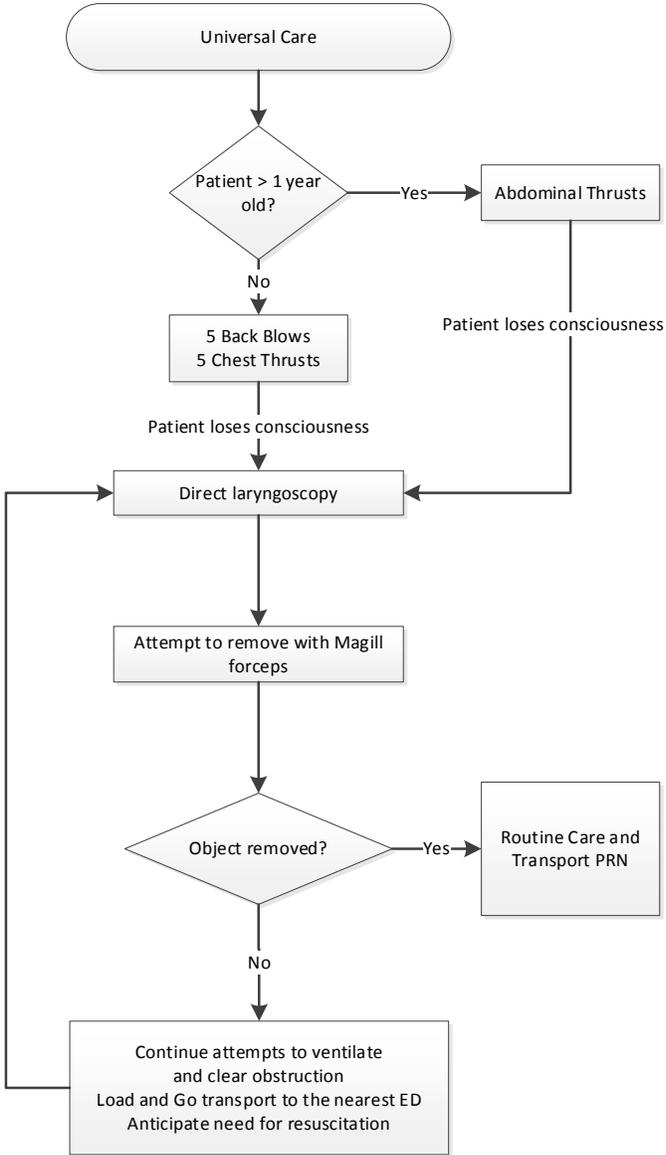
Back Blows/Chest Thrusts/ Abdominal Thrusts
 Continue until airway is cleared or patient loses consciousness.

Quality Improvement:

Key Documentation Elements

1. Interventions, number of attempts
2. Scene time if load and go scenario

Patient Safety Considerations
 Ongoing assessment is critical
 If unable to clear airway obstruction, unable to oxygenate, unable to ventilate, transport immediately to the nearest ED.



- NOTES:**
- Abdominal thrusts are no longer indicated in unconscious patients.
 - If unable to clear patient's airway, continue attempts to remove/ventilate and begin *immediate* transport to the closest most appropriate ED.
 - King LT-D insertion is not indicated in respiratory distress secondary to airway obstruction.

Initiated: 01/25/2018
 Reviewed/Revised:
 Revision

Approved: M. Riccardo Colella, DO, MPH, FACEP
 Reviewed: EMS Division Director Kenneth Sternig, RN
 WI DHS EMS Approval: 03/01/2018

Pg 1 of 1



**Respiratory - Airway:
BRONCHOSPASM:
Medical Protocol**

Patient Care Goals:

1. Alleviate respiratory distress due to bronchospasm
2. Promptly identify and intervene for patients who require escalation of therapy
3. Deliver appropriate therapy by differentiating other causes of respiratory distress

Patient Presentation:

Inclusion Criteria

Respiratory distress with wheezing or decreased air entry presumed to be due to bronchospasm from reactive airway disease, asthma, or obstructive lung disease.

RELATIVE Exclusion Criteria

Respiratory distress due to a presumed underlying cause that includes one of the following:

1. Anaphylaxis (may be used as adjunctive therapy)
2. Bronchiolitis (wheezing < 2 years of age)
3. Croup
4. Epiglottitis
5. Foreign body aspiration
6. Submersion/drowning (may be used as adjunctive therapy)
7. Congestive heart failure (may be used as adjunctive therapy)

Nebulizer Treatment <LESS< than 30 Kg

albuterol: 2.5 mg nebulized every 5 mins to a max cumulative dose of 7.5 mg.
ipratropium: 0.5 mg nebulized every 5 mins to a max cumulative dose of 1.5 mg.

Nebulizer Treatment 30 Kg or >GREATER>

albuterol: 5 mg nebulized every 5 mins to a max cumulative dose of 15 mg.
ipratropium: 1 mg nebulized every 5 mins to a max cumulative dose of 3 mg.

Quality Improvement:

Key Documentation Elements

1. Severity of Bronchospasm
2. Response to treatments and decision making for care escalation.

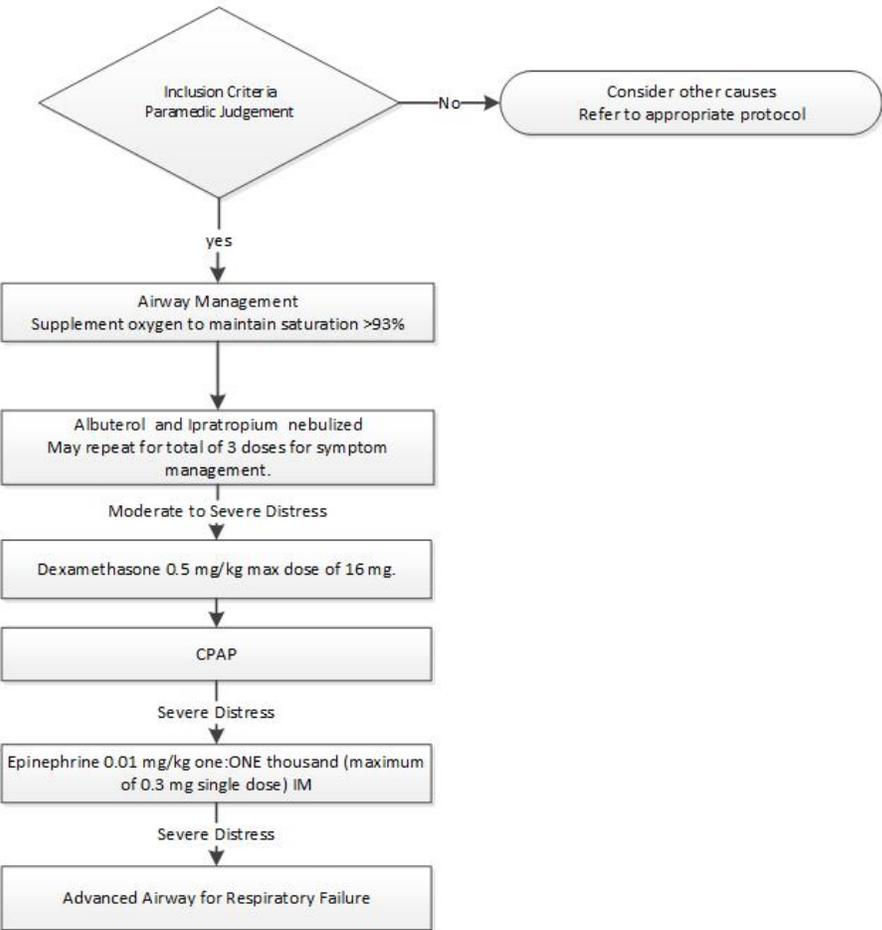
Patient Safety Considerations

Positive Pressure Ventilation increases risk of pneumothorax.

Nebulized medication increases risk of infection to provider.

Routine IV often unnecessary.

Routine use of lights and sirens is not recommended during transport unless severe or refractory to EMS interventions.





Respiratory:
END TIDAL CAPNOGRAPHY APPLICATION
Practice Guideline

End Tidal Capnography (ETCO₂) monitoring of spontaneously breathing, non-intubated patients allows for early effective detection of hypoventilation that may result from analgesia, sedation, or medical conditions such as sedating overdoses or intoxication.

ETCO₂ may be effective in detection of metabolic acidosis causing hyperventilation in conditions such as sepsis.

This policy will focus on ETCO₂ as an adjunct for early assessment of hypoventilation; other applications of ETCO₂ for various medical conditions have been reported but are beyond the scope of this guideline.

Capnography Values

ETCO₂ 35-45 mm Hg is the normal value for capnography.

ETCO₂ Less Than 35 mmHg (HYPOcapnia ↓) suggests hyperventilation. ↑

ETCO₂ Greater Than 45 mmHg (HYPERcapnia ↑) suggests hypoventilation. ↓

A flat-line ETCO₂ suggests apnea.

POLICY:

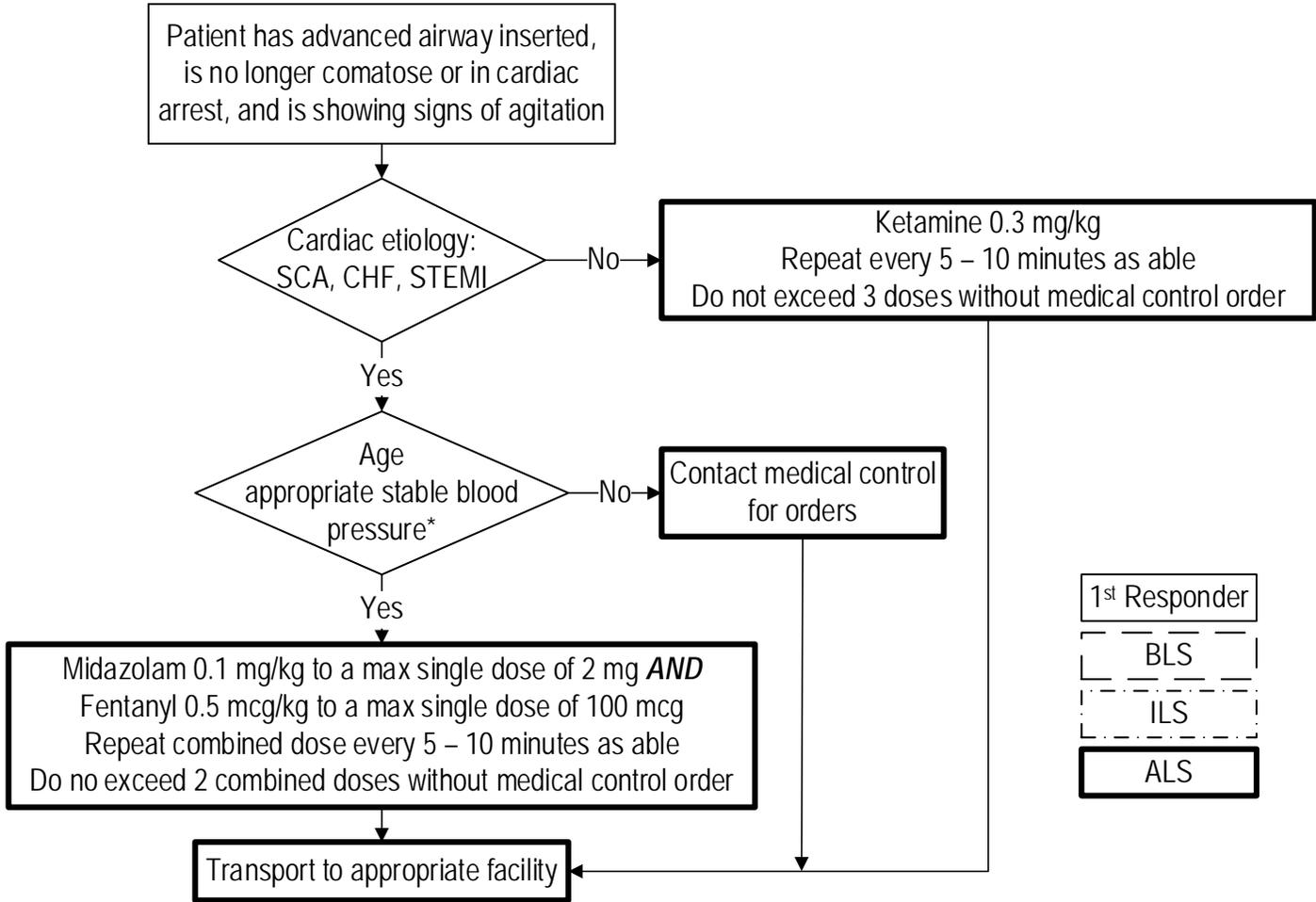
- ETCO₂ will be applied on all patients who receive ketamine. Since ketamine often increases respiratory rate, the ETCO₂ value may often be less than 35 mmHg. A rare side effect of ketamine is laryngospasm. The combination of absent chest wall movement and a flat-line waveform differentiates apnea from upper airway obstruction or laryngospasm, both of which manifest chest wall movement. Response to airway alignment maneuvers (e.g., chin lift, jaw thrust) can often distinguish upper airway obstruction from laryngospasm.
- ETCO₂ will be applied on all patients below age 10 and above age 60 who receive more than 2 doses of fentanyl or midazolam. An increasing ETCO₂ trend (greater than 45 mmHg) may indicate early hypoventilation requiring stimulation, airway repositioning, reversal agent, or other airway/ventilation assistance.
- ETCO₂ will be applied on all patients whenever the clinical judgement of the EMS provider feels patient is altered as a result of a medication provided by EMS or from a medical condition being experienced by the patient. An increasing ETCO₂ trend (greater than 45 mmHg) may indicate early hypoventilation requiring stimulation, airway repositioning, reversal agent, or other airway/ventilation assistance.

ETCO₂ values should be clinically correlated.



**Respiratory - Airway:
SEDATION FOLLOWING AIRWAY PLACEMENT:
Practice Guideline**

History: Recent placement of advanced airway with signs of agitation as a result	Signs/Symptoms: No longer comatose Bucking the airway Increased heart rate Tearing Patient movement
--	---



- 1st Responder
- BLS
- ILS
- ALS

- Notes:**
- Age appropriate blood pressure:
 - Adult – over 90 systolic
 - Pediatric – over 70 + (2 x age) up to 90 mm Hg
 - SCA = Sudden Cardiac Arrest; CHF = Congestive Heart Failure; STEMI = ST segment Elevation Myocardial Infarction



**Resuscitation:
CARDIAC ARREST – ADULT (MEDICAL)
Practice Guideline**

Patient Care Goals:
 1. Return of Spontaneous Circulation (ROSC)
 2. Preservation of neurologic function

Patient Presentation:
Inclusion Criteria:
 Adult (18 or older) without palpable pulses
Exclusion Criteria:
 Patients with valid DNR/POLST order
 Obvious death as defined as: decapitation, rigor mortis, dependent lividity, decomposition, full thickness burns >90% of body, hypothermia with rigid airway or ice formation in airway
 Obvious traumatic etiology (see Traumatic Cardiac Arrest practice guideline)

Defibrillation:
 Anterolateral pad placement, biphasic dose 200J
 Resume compressions immediately after shock

Refractory Vfib/Vtach (defined as persistent rhythm not responding to 300 mg of amiodarone, and 3 defibrillation attempts from any device):
 Limit Epinephrine to 3 doses while refractory.
 Apply second pad in the anterior/posterior orientation and deliver remaining shocks in this orientation.

Medications:
 Epinephrine 1:TEN THOUSAND 1 mg q3-5 min IV/IO.
 Amiodarone IV/IO, 300mg bolus (first dose) then 150mg bolus (second dose) after 8-10 min.

Advanced Airway:
 King airway placement or Endotracheal intubation

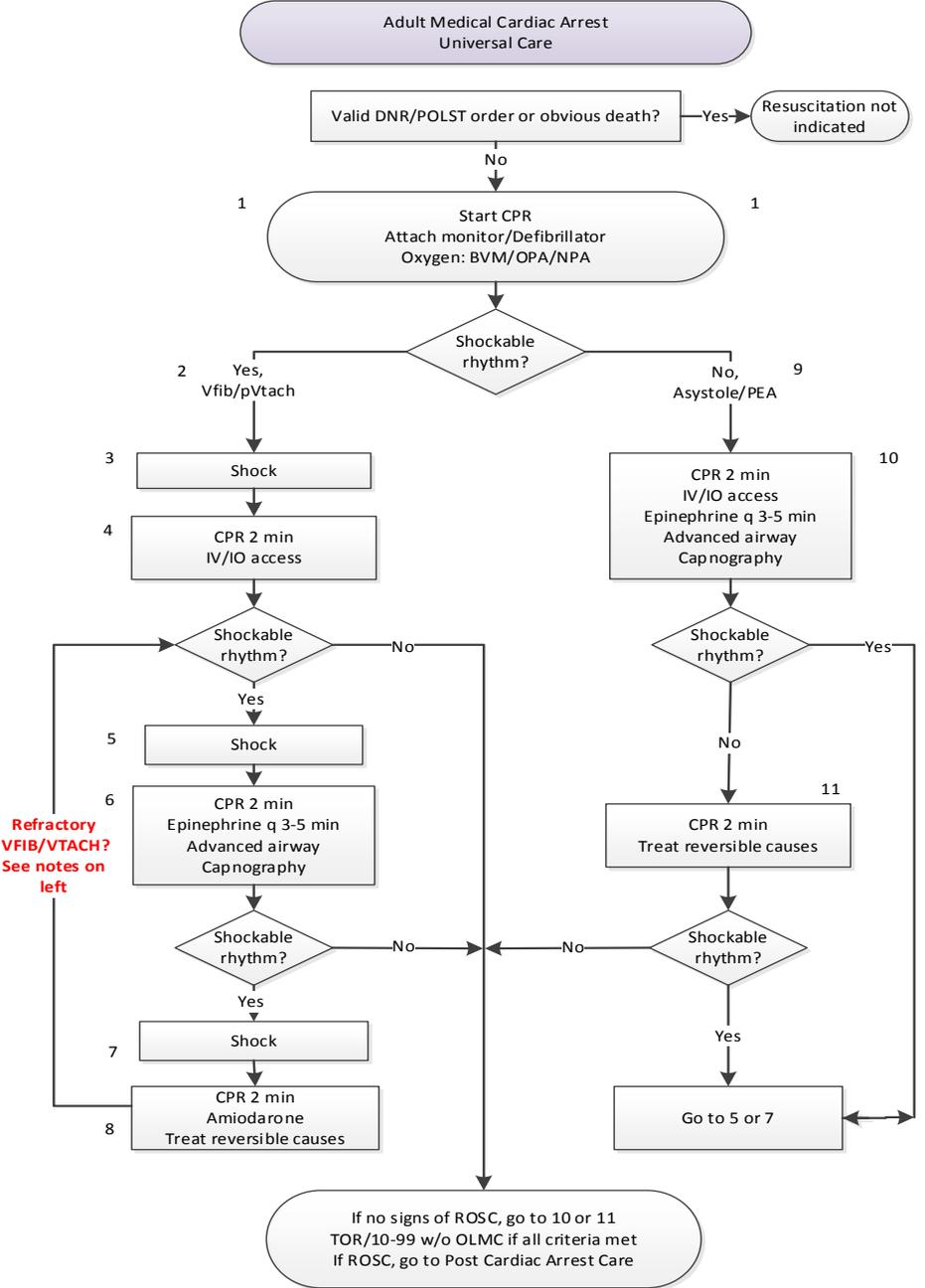
Quality Improvement:
 Push hard (> 2 inches) and fast (100-120/min).
 Minimize interruptions in compressions.
 Rotate compressors every 2 minutes.
 Avoid excessive ventilation (1 breath every 6 seconds).
 Capnography.

Key Documentation elements:
 Times of resuscitation and all interventions
 Witnessed?
 Bystander CPR?
 Initial rhythm shockable/first monitored rhythm?
 Any ROSC

TOR/10-99 criteria w/o OLMC
 Age 18 or older.
 Cardiac arrest not witnessed by EMS Provider.
 Continuous asystole throughout resuscitation attempt.
 Not believed related to environmental hypothermia.
 Patent airway.
 High quality CPR.
 15 minute resuscitation effort EtCO2 10 mm Hg or less.
 Document termination of resuscitation by standing order of OLMC physician #0010.

Safety Considerations:
 Generally transport only after ROSC however circumstances may arise when transport is indicated such as certain submersion, thoracic penetrating trauma arrest, or refractory vfib/vtach cases; a mechanical CPR device is encouraged.

Notes:
 If fire victim has ROSC/hypotension/alt loc, evaluate for cyanide poisoning and consider administration of hydroxocobalamin (Cyanokit®).
 There is no evidence of naloxone improving the chance of ROSC due to opiate overdose. Focus on good CPR with standard ACLS rather than attempts with naloxone.



Refractory V FIB/VTACH?
 See notes on left

Call early OLMC immediately if unclear DNR/POLST or if patient pregnant >20 weeks.
 Contact OLMC after 3 rounds of Epi if patient does not meet all TOR criteria.

Initiated: 11/01/1973
 Reviewed/Revised: 03/01/2018
 Revision 33

Approved: M. Riccardo Colella, DO, MPH, FACEP
 Reviewed: EMS Division Director Kenneth Sternig, RN
 WI DHS EMS Approval: 03/01/2018

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**Pediatric Specific:
CARDIAC ARREST – PEDIATRIC (MEDICAL)
Practice Guideline**

Patient Care Goals:

1. Return of Spontaneous Circulation (ROSC)
2. Preservation of neurologic function

Patient Presentation:

Inclusion Criteria:

Pediatric patient without palpable pulses

Exclusion Criteria:

Patients with valid DNR/POLST order
 Obvious death as defined as: decapitation, rigor mortis, dependent lividity, decomposition, full thickness burns >90% of body, hypothermia with rigid airway or ice formation in airway
 Obvious traumatic etiology (see Traumatic Cardiac Arrest practice guideline)

Defibrillation:

Anterolateral pad placement, biphasic dose 2 J/kg first shock; 4 J/kg subsequent shocks to maximum single shock dose of 200 Joules

Resume compressions immediately after shock

Refractory Vfib/Vtach (defined as persistent rhythm not responding to loading dose of amiodarone, and 3 defibrillation attempts from any device):

Limit Epinephrine to 3 doses while refractory. Apply second pad in the anterior/posterior orientation and deliver remaining shocks in this orientation.

Medications:

Epinephrine 1:TEN THOUSAND 0.01 mg/kg (max of 1 mg per dose) q3-5 min IV/IO
 Amiodarone IV/IO, 5 mg/kg bolus; may repeat same bolus dose after 8-10 min.
 NS bolus 20 mL/kg pressure bag over 5 mins; repeat X 1 if no ROSC.

Advanced Airway:

King airway

Quality Improvement:

Push hard (> 1/3 AP diameter of chest) and fast (100-120/min).
 Minimize interruptions in compressions.
 Rotate compressors every 2 minutes.
 Avoid excessive ventilation (1 breath every 6 seconds).
 Capnography.

Key Documentation elements:

Times of resuscitation and all interventions
 Witnessed?
 Bystander CPR?
 Initial rhythm shockable/first monitored rhythm?
 Any ROSC

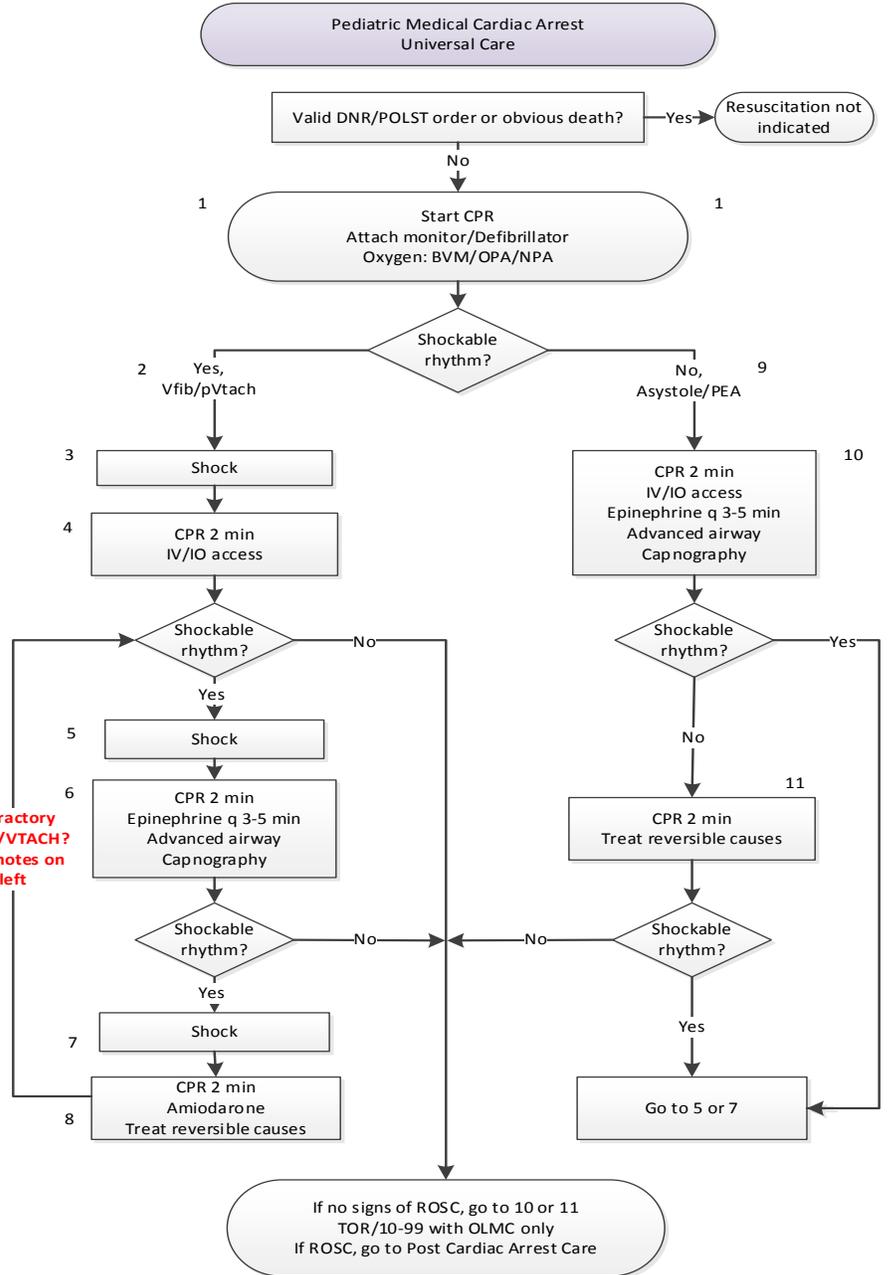
TOR/10-99 criteria with OLMC

- OLMC should be involved with TOR decision; factors likely to favor TOR include:
- Cardiac arrest not witnessed by EMS Provider
 - Continuous asystole throughout resuscitation attempt
 - Not believed related to environmental hypothermia
 - Patent airway
 - High quality CPR
 - 15 minute resuscitation effort EtCO₂ 10 mmHg or less
 - Clinical death exam positive

Safety Considerations:

Transport of patients with ongoing resuscitation may arise in certain circumstances such as submersion, thoracic penetrating trauma arrest, or refractory vfib/vtach; a mechanical CPR device is encouraged.

Refractory V FIB/VTACH?
See notes on left



Call early OLMC immediately if unclear DNR/POLST or if patient pregnant >20 weeks.
 Contact OLMC after beginning aggressive resuscitation. Do not delay initial resuscitation.

Initiated: 01/01/2017
 Reviewed/Revised: 03/01/2018
 Revision 1

Approved: M. Riccardo Colella, DO, MPH, FACEP
 Reviewed: EMS Division Director Kenneth Sternig, RN
 WI DHS EMS Approval: 03/01/2018

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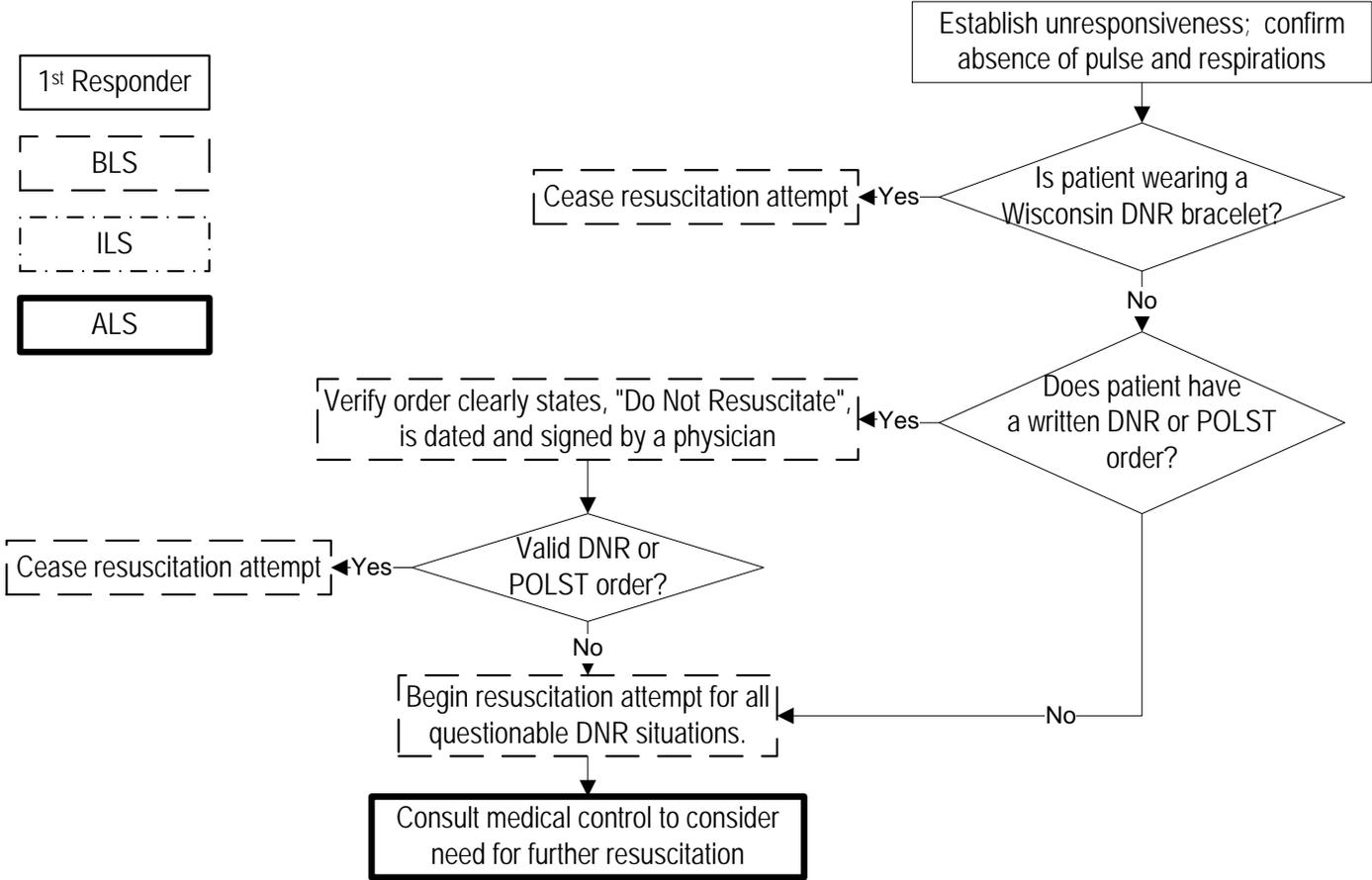
**Resuscitation:
DO NOT RESUSCITATE ORDER
Practice Guideline**

1st Responder

BLS

ILS

ALS



NOTES:

- POLST – Physician Orders for Life-Sustaining Treatment
- A “medic alert” bracelet qualifies as a DNR order for all EMS providers
- A patient’s guardian may override the DNR order. For these situations, begin resuscitation efforts and consult medical control for further orders.
- EMS providers may not accept verbal orders from a private physician who is not physically present at the scene. Input from the private physician is welcomed, but should be communicated directly to medical control. The EMS team should facilitate the communication between those physicians.
- An on-scene physician accepting responsibility for the care of the patient must write, sign and date a "Do-Not-Resuscitate" order on the EMS run report.
- Modification of or withholding medical care based on a "Living Will" or "Medical/Health Care Power of Attorney" or other document must be approved by medical control. Appropriate medical care will be provided to the patient while a direct order from medical control is obtained.



LUCAS Chest Compression System

LUCAS is a mechanical compression device as a substitute for manual compressions when indicated and available.

Routine management of presumed medical cardiac arrest is defined by the OEM-EMS Standards of Care Manual or through On-Line Medical Control.

Indications

The LUCAS may be used in patients 12 years of age and older with presumed medical cardiac arrest who have received at least one cycle (2 minutes) of manual compressions.

Contraindications

Presumed traumatic cardiac arrest, and patients who otherwise would not require compressions (obvious signs of death, valid DNR orders).

Patients in whom you cannot safely or appropriately position the device, including but not limited to size of the chest. Patients are too large for the device if you cannot lock the upper part to the back plate without compressing the chest. Patients are too small for the device if you cannot pull the suction cup down to touch the sternum, or cannot enter PAUSE or ACTIVE mode with the suction cup lowered against the chest.

Notes

- The LUCAS will be used in ACTIVE-Continuous Mode (continuous compressions)
- Refer to the LUCAS Chest Compression System Practical Skills Document.
- Interruption of chest compressions should be no longer than 20 seconds for device placement, and no longer than 10 seconds for any other interruptions (rhythm/pulse check, moving patient).
- If the LUCAS compression system fails to deliver adequate chest compressions at any point, resume manual chest compressions.
- Transport of patients in cardiac arrest with LUCAS is a clinical decision independent of its use.



**Resuscitation:
ROSC
Medical Protocol**

Patient Care Goals:

1. Optimize neurologic and other function following a return of spontaneous circulation following resuscitated cardiac arrest.
2. Provide timely therapy to prevent subsequent cardiorespiratory collapse through optimal ventilation and hemodynamic support, as many ROSC patients will re-arrest.

Patient Presentation:

Inclusion Criteria

All patients resuscitated from a presumed medical cardiac arrest.

Exclusion Criteria

Resuscitation from traumatic cardiac arrest; see Trauma Arrest protocol.

Medications:

Normal saline

20 mL/kg IV/IO bolus.

Norepinephrine:

Adult (≥40 kg)
8 to 12 mcg/min infusion
Refer to medication list for drip rate

Pediatric (<40 kg)
On Line Medical Control required
Refer to medication list for drip rate

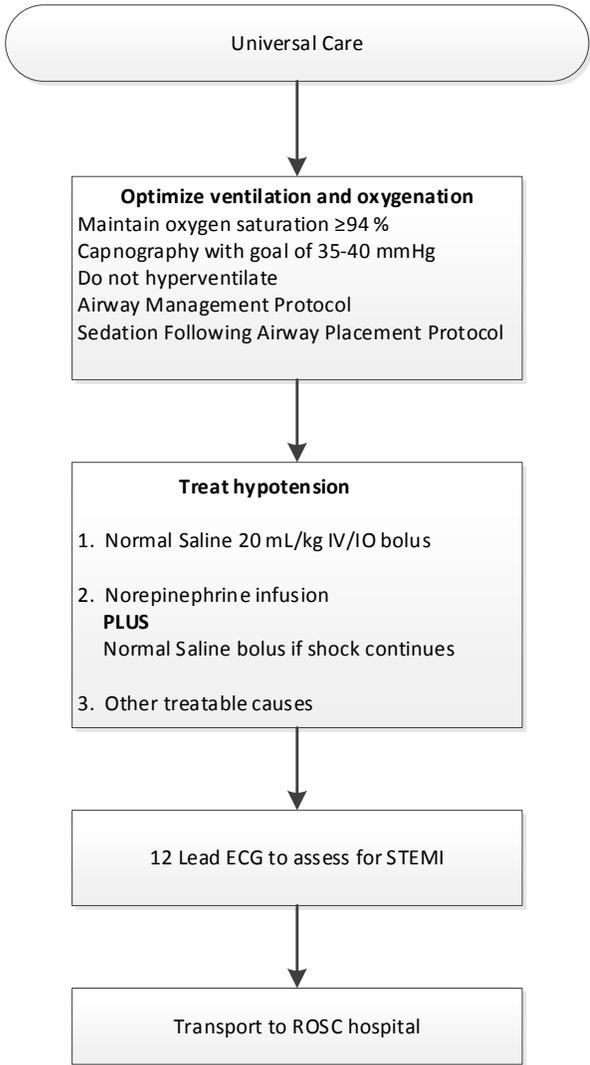
Quality Improvement:

- Key Documentation Elements
1. respiratory rate
 2. capnography
 3. blood pressure support
 4. sedation

Patient Safety Considerations

1. Common causes of post-resuscitation hypotension include hyperventilation, hypovolemia, and pneumothorax
2. Should re-arrest occur enroute, continue to follow ventilation and hypotension recommendations; proximity to receiving hospital should be considered. Ensure safe and high quality CPR; mechanical CPR device is encouraged.

Paramedic Working Assessment: Return of Spontaneous Circulation (ROSC) after presumed medical arrest





Resuscitation:
VENTRICULAR TACHYCARDIA WITH PULSE
 Medical Protocol

Patient Care Goals:

1. Maintain adequate oxygenation, ventilation, and perfusion
2. Restore regular sinus rhythm, correct rhythm disturbance if unstable
3. Search for underlying cause (medications, drugs, CHF, history of dysrhythmia)

Patient Presentation:

May present with symptoms such as palpitations, dyspnea, chest pain, syncope/near syncope, hemodynamic instability, altered mental status
 Inclusion Criteria
 Heart rate >150 in adults
 Exclusion criteria
 Sinus tachycardia

Adenosine:

Adenosine 12mg IV followed immediately by rapid 10ml flush of NSS. May repeat one additional dose if no improvement within 5 minutes.

Amiodarone:

150mg IV over 10 minutes.

Synchronized Cardioversion:

100J initially; 150J for subsequent doses.

Sedation/Analgesia PRN stability:

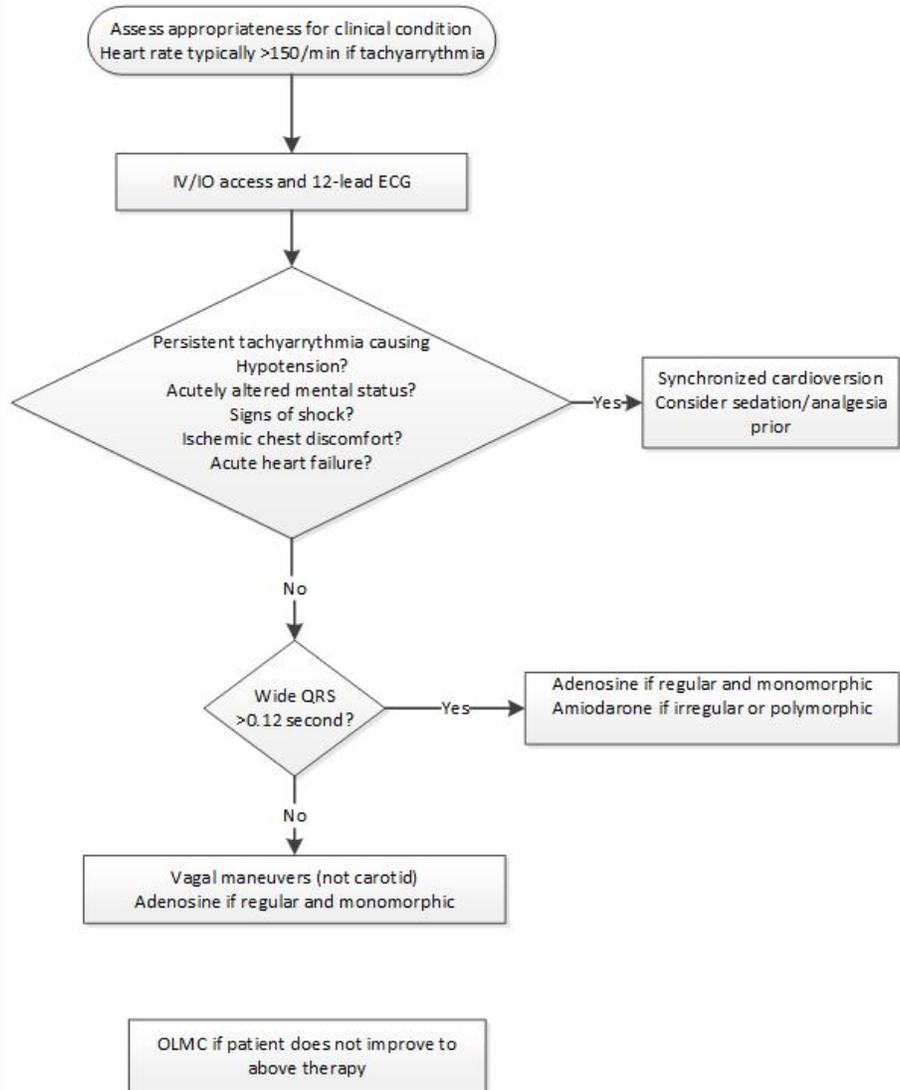
Midazolam 0.1 mg/kg max of 2 mg.
 Fentanyl 0.5 to 1 mcg/kg max of 100 mcg.

Quality Improvement:

- Key Documentation Elements
1. Heart rate and rhythm changes
 2. Interventions
 3. Mental status or signs of instability

Patient Safety Considerations

Routine use of lights and sirens is not recommended during transport unless hemodynamically unstable





**Special Operations - Tactical EMS (TEMS):
CARE OF PATIENT IN TACTICAL SETTING:
Practice Guideline**

POLICY: All Tactical EMS (TEMS) providers must operate with an awareness of the tactical situation. The first priority is maintaining the safety and security of TEMS providers, law enforcement officers, other team members, and patients. The second priority is to support the completion of the mission. General operating procedures are described below.

I. General Issues

A. Area of operations

1. No TEMS provider is to enter the designated "hot zone", nor engage in direct tactical operations
2. TEMS providers will operate in the "warm zone" as allowed by local department policies and procedures (the local law enforcement agency will have responsibility for providing security for TEMS providers)
3. TEMS providers may operate in the "cold zone" as needed

B. Maintaining security

1. TEMS providers will always maintain a vigilant defensive posture
2. Primary responsibility for area/scene security rests with the law enforcement agency
3. TEMS providers will follow the tactical instructions of law enforcement officers
4. When not involved with patient care, TEMS providers may, at the team's discretion, assist by observing the area for potential threats, and communicating with law enforcement officers

C. Weapons

1. All TEMS providers will remain alert to detect any weapons carried by a patient
2. If weapons are detected, the TEMS provider will contact a law enforcement officer to remove them
3. TEMS providers are not to handle weapons unless there is an immediate danger to the safety of team members or the patient
4. If handling of a weapon is unavoidable, the provider will use universal precautions in handling weapons, will adhere to the standard Milwaukee County EMS operational policy on Potential Crime Scenes, and will contact a law enforcement officer immediately to take possession of the weapon

II. Patient care

A. TEMS providers must pay the utmost attention to the safety of team members

B. TEMS providers must not deliver care if doing so will jeopardize the safety of themselves or other team members

C. All patients are to be disarmed by law enforcement before delivery of care, except in extreme circumstances

D. TEMS providers will adhere to Milwaukee County EMS policies, procedures, and protocols when caring for patients

E. Suspects and bystanders as patients

1. All suspects and bystanders must be disarmed by law enforcement before care is rendered
2. TEMS providers will contact a law enforcement officer when needed to secure a patient or weapons

F. Team members as patients

1. Except in extreme circumstances, all team members are to be disarmed by law enforcement officers before delivery of care by TEMS providers
2. An armed team member must be disarmed if any of the following occur in the patient
 - a. Confusion, disorientation, or loss of consciousness
 - b. Systolic blood pressure less than 100
 - c. Loss of radial pulse
3. TEMS providers will contact a law enforcement officer when needed to restrain a team member and/or secure weapons



**Special Operations - Tactical EMS (TEMS):
DOCUMENTATION - TEMS:
Practice Guideline**

POLICY: All patient encounters by a Milwaukee County EMS provider will be documented. Patient privacy and the confidentiality of all medical records will be maintained at all times.

- I. Documentation of Care of Bystanders and Suspects
 - A. All patients who are bystanders or suspects will receive a full assessment per usual Milwaukee County EMS policies and protocols
 - B. The normal patient care record must be completed as per usual Milwaukee County EMS policies and protocols

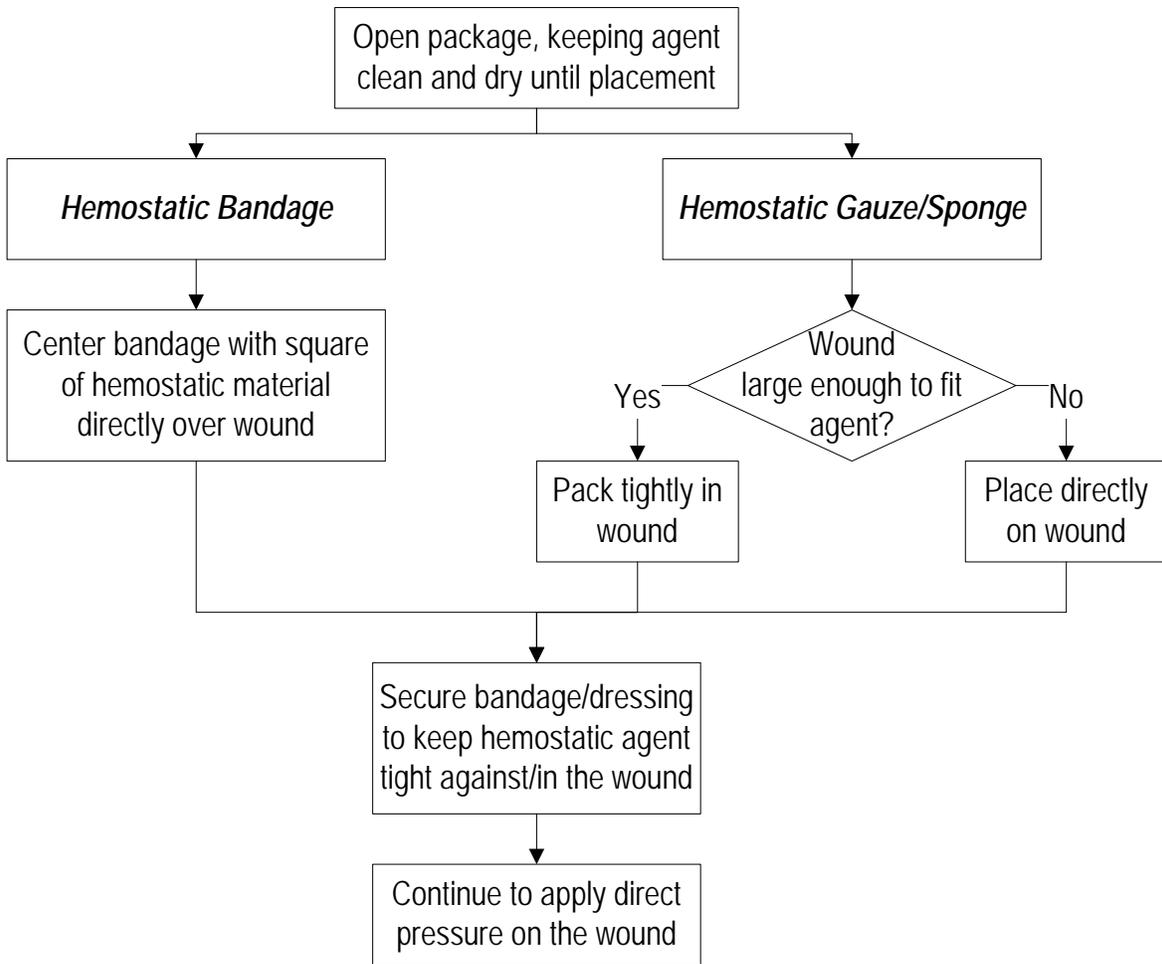
- II. Documentation of Care of TEMS or Law Enforcement Personnel
 - A. TEMS providers will follow all usual Milwaukee County EMS policies and protocols in caring for team personnel
 - B. Individual departments should complete their internal documentation for on-duty personnel injuries/illness
 - C. The following situations require a full patient assessment and completion of the normal patient care record regardless of visible injuries or symptoms:
 - i. Any injury inflicted by a suspect
 - ii. Any injury sustained during contact with a suspect
 - iii. Any motor vehicle crash, gunshot wound, or stabbing
 - D. TEMS providers will consult the medical director if there are any questions regarding proper documentation

- III. Review of Documentation
 - A. Copies of all patient encounters are to be submitted to Milwaukee County EMS
 - B. All patient encounters will be reviewed by the TEMS medical director
 - C. Medical records will not be released to anyone without the written consent of the patient (except in III-D below).
 - D. The medical director may choose to review cases with TEMS providers for educational and quality assurance purposes. Patient privacy will be maintained during these discussions, and no information will be transmitted outside of the discussion session.



**Special Operations - Tactical EMS (TEMS):
HEMOSTATIC AGENT USE:
Practice Guideline**

Purpose: To stop uncontrolled hemorrhage not responsive to continued direct pressure		Indications: Uncontrolled hemorrhage not responsive to continued direct pressure Large or gaping wounds with hemorrhage Hemorrhaging wounds not appropriate for tourniquet use	
Advantages: May promote clotting of blood to reduce/stop hemorrhage	Disadvantages: Requires proper placement and direct pressure	Complications: Further trauma to wound during placement	Contraindications: None

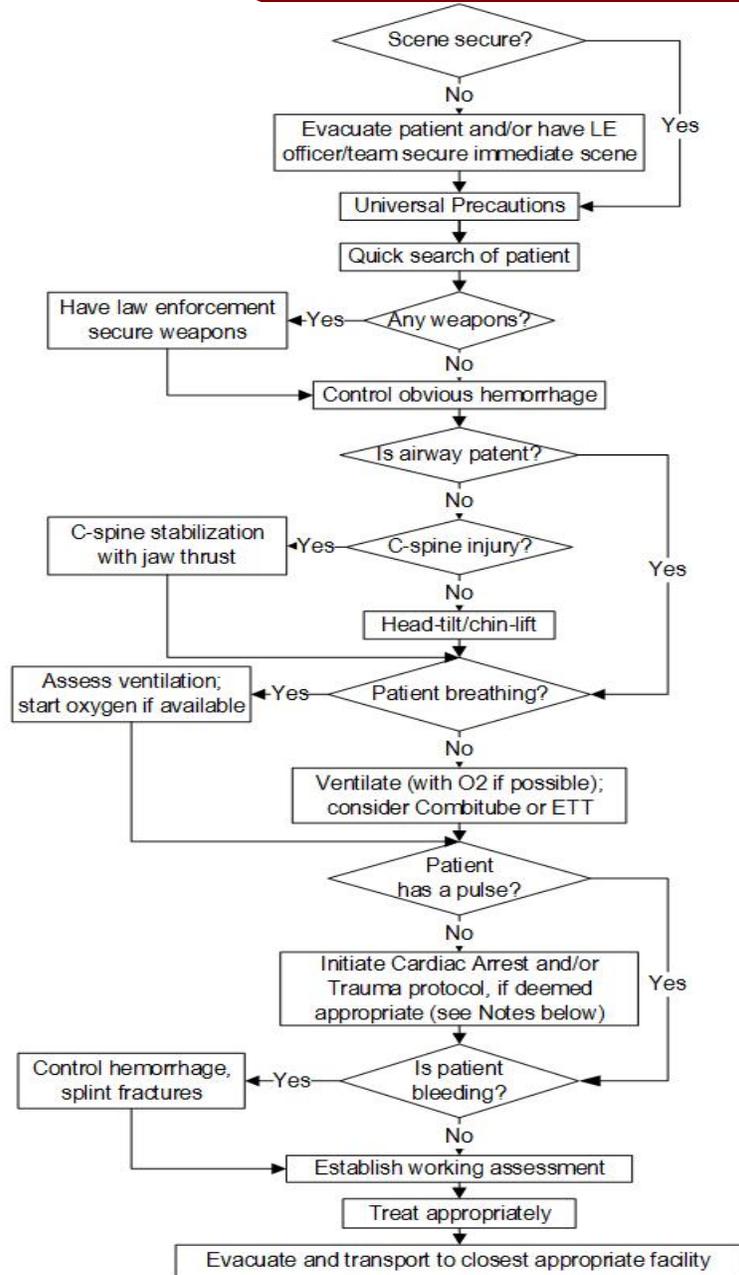


Notes:

- Approved hemostatic agents include –QuickClot gauzes and bandages, QuickClot ACS/1st Response, QuickClot Sport, HemeCon bandages and dressings
- Direct pressure on a wound is required with the use of a hemostatic agent. Hemostatic agents are only an adjunct to use of direct pressure and/or tourniquet.



**Special Operations - Tactical EMS (TEMS):
ROUTINE MEDICAL CARE FOR ALL TACTICAL PATIENTS
Practice Guideline**



Notes:

- When under direct tactical threat, appropriate care is first to evacuate to a safe location or secure the area.
- Before initiating CPR in traumatic arrests, providers should weigh the risks to team safety versus the extremely low survival rate from traumatic arrest in the tactical setting. CPR should still be administered in cases where the cause of arrest is believed to be cardiac, poisoning/overdose, hypothermia, or electrical injury.
- Data show an extremely low incidence of cervical cord injury in penetrating neck trauma patients who do not have obvious spinal deformities or neurologic findings. Providers may decide how to best implement C-spine precautions in the tactical setting.
- All usual Milwaukee County EMS procedures regarding written and radio patient care reports still apply.



POLICY: All TEMS providers will maintain the highest levels of operations security ("OPSEC") at all times. TEMS providers will conduct a pre-mission medical assessment at all operations.

- I. Operations Security
 - A. All information on tactical operations will be kept confidential at all times. This includes (but is not limited to) mission locations, mission objectives, status of personnel, any pre and post-mission briefings, or other intelligence information.
 - B. Information may be shared with TEMS personnel on a need-to-know basis only, and only with the permission of the on-scene tactical law enforcement commander
 - C. Any breach or suspected breach of operations security must be reported to the on-scene tactical law enforcement commander

- II. Medical Intelligence
 - A. Before any operation, TEMS providers will conduct a pre-mission medical threat assessment and complete a mission checklist/report
 - B. The medical threat assessment at a minimum must include the following:
 - i. Location of tactical command post
 - ii. Location of tactical rally point
 - iii. Designated evacuation route and mode of transportation
 - iv. Location and capabilities of hospital closest to mission site
 - v. Location and capabilities of closest trauma center
 - vi. Availability of other EMS support
 - vii. Availability of air-medical assets and location of possible landing sites
 - viii. Possible environmental threats (heat, cold, sun, etc.)
 - ix. Possible hazardous materials (chemical, biological, radiological/nuclear, explosive) threats
 - x. Any other circumstances that may affect the health of personnel
 - C. The TEMS providers will relay a summary of the medical threat assessment (either verbally or in writing) to the on-scene tactical law enforcement commander
 - D. For sustained or continuous operations (over 4 hours), a new assessment should be performed and recorded every 4 hours.
 - E. In the event of the arrival of additional TEMS providers on-scene, the complete medical threat assessment will be relayed (either verbally or in writing) to the newly arriving providers
 - F. After the conclusion of the mission, a copy of the completed checklist/report will be forwarded to Milwaukee County EMS.



**Special Operations:
SPECIAL OPERATIONS:
Practice Guideline**

POLICY:

- All teams utilizing special operations policies, protocols and standards under Milwaukee County EMS direction must have prior approval from Milwaukee County EMS.
- All special operation teams will adopt and adhere to the standards of care, medical protocols, standards for practical skills and operational policies as outlined in the *Milwaukee County EMS Standards Manual* defining the community standard of care. Supplemental special team specific standards of care, medical protocols, standards for practical skills and operational policies are defined in the Special Operations section of the *Milwaukee County EMS Standards Manual*.
- A paramedic may only be assigned to a special team after satisfactory completion of training consistent with local, state, and national standards.
- Policies unique to a special team are to be implemented only under circumstances where the team has been activated.



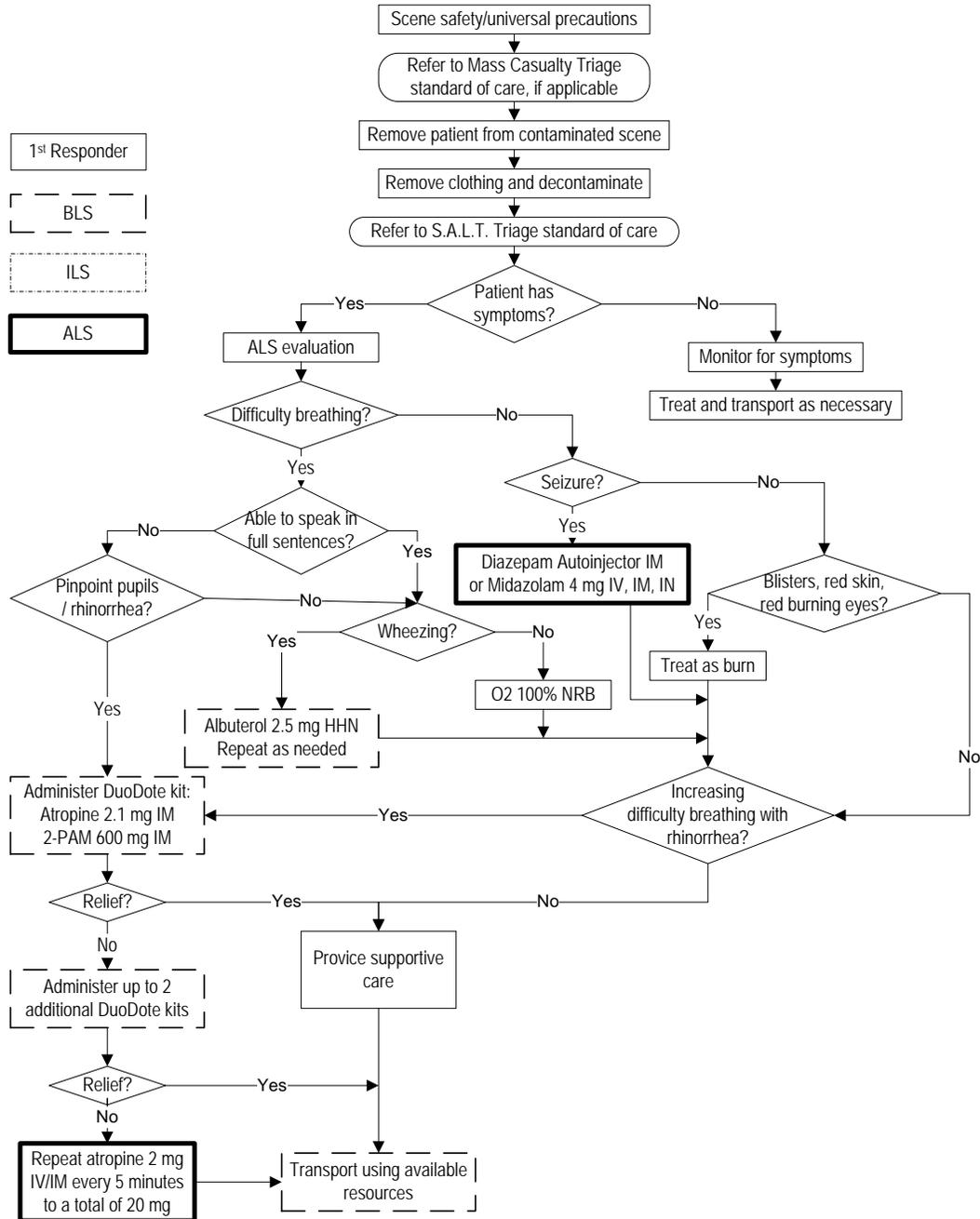
POLICY: The following definitions will apply to terms used in TEMS policies.

- I. Law Enforcement Officer – A sworn member of a police department who is authorized to enforce laws (“Law Enforcement Officer” is to be differentiated from Fire/EMS officers)
- II. Tactical care – Prehospital medical care rendered during active law enforcement or military Operations.
- III. TEMS – Tactical Emergency Medical Services
- IV. TEMS provider – Also “TEMS operator”, an active status member of a recognized TEMS program able to render tactical care
- V. Team – Group of EMS and law enforcement personnel operating together
- VI. Zones of Care – Areas of operation classified by the level of threats to the safety and security of persons within the area
 - A. Hot Zone – Area with a direct and immediate threat to safety; rendering care poses an immediate risk to patient and provider
 - B. Warm Zone – Area with threats to safety, though not immediate or direct; rendering care may pose a risk to patient and provider due to the possibility of becoming a hot zone
 - C. Cold Zone – Area without any reasonable threat either due to distance, barriers, or substantial interposed security presence; care can be delivered without risk



**Toxins & Environmental:
CHEMICAL EXPOSURE:
Medical Protocol**

This is intended to be used only in cases of possible exposure to nerve agents or other organophosphates (e.g. insecticides).





**Toxins & Environmental:
CHEMICAL EXPOSURE:
Medical Protocol**

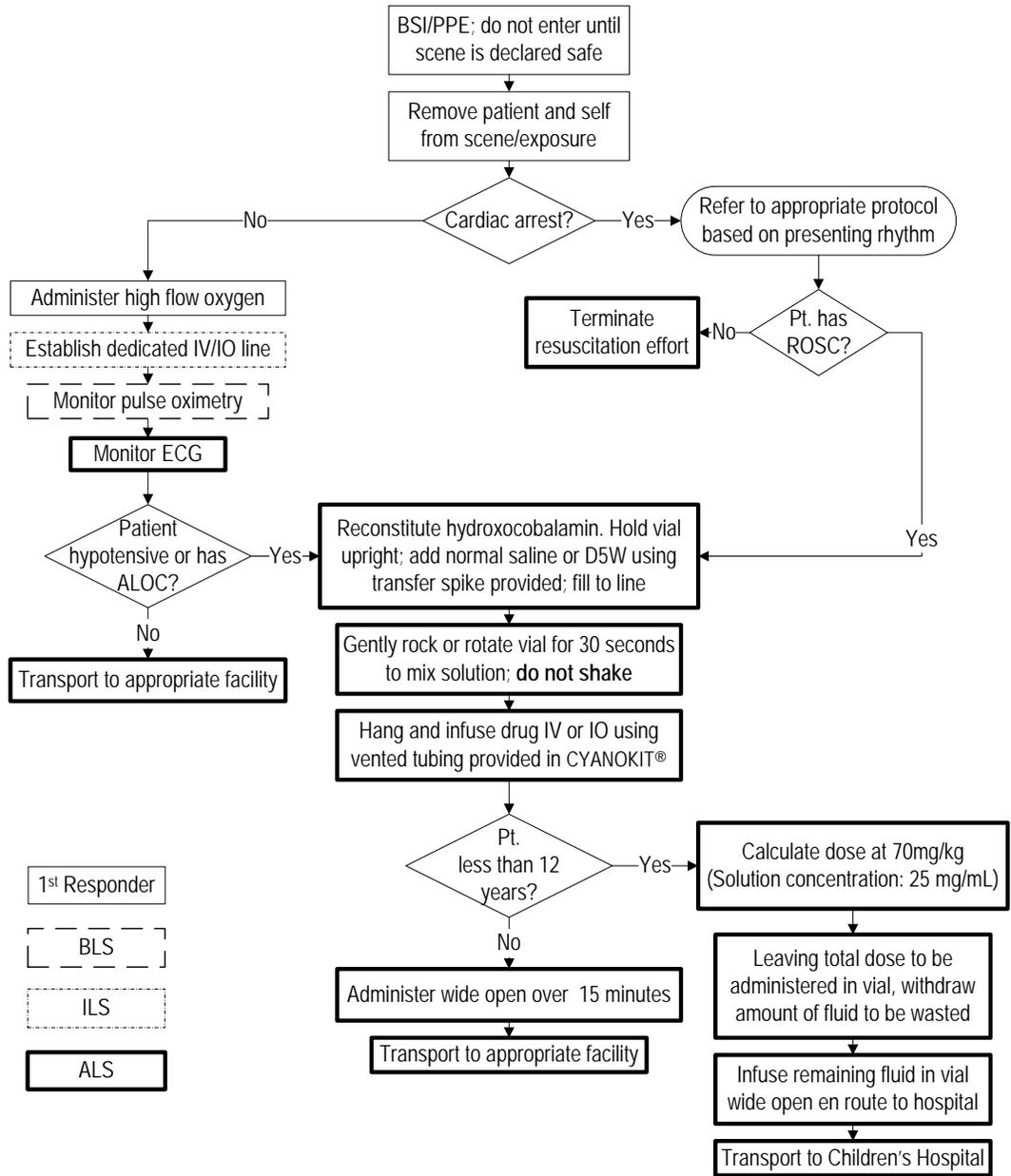
Signs/Symptoms
Salivation (drooling)
Lacrimation (tearing)
Urination
Defecation (diarrhea)
Generalized twitching/seizures
Emesis (vomiting)
Miosis (pinpoint pupils)

NOTES:

- If symptoms of SLUDGEM appear, the first step is to remove the patient from the contaminated area as quickly as possible. This is often the only treatment needed.
- If vapor exposure alone, no need for skin decontamination.
- Administration of atropine is indicated only if there is an increasing difficulty breathing (inability to speak in full sentences) and rhinorrhea. If miosis alone, do not administer atropine.
- A total of three DuoDote kits may be administered to a single patient.
- Premature administration of the DuoDote kit poses a higher risk of death due to atropine-induced MI
-



**Toxins & Environmental:
CYANIDE POISONING:
Medical Protocol**



- 1st Responder
- BLS
- ILS
- ALS

NOTES:

- Cyanide kits may be supplied by industrial facility where there is a risk of employee exposure
- Cyanide kit provides medication, vented IV tubing and transfer spike
- A dedicated IV line is critical, as the medication (hydroxocobalamin) is not compatible with many other medications
- Medication turns red when reconstituted



**Resuscitation:
DROWNING
Practice Guideline**

Patient Care Goals
 1. Rapid assessment and management of life-threatening injuries
 2. Transport of appropriately selected patients

Patient Presentation:
Inclusion Criteria
 All patients with submersion/immersion in a liquid medium that impairs respiration; asphyxia preceding potential hypothermia.

Medications or Procedures:
 Airway Management with aggressive gastric suction
 Cardiac Arrest Protocols (Adult and Pediatric)
 Trauma Arrest Protocols
 Selective Spinal Stabilization PRN

Transport Considerations:
 Submersion time of < 25 minutes consider minimizing scene time and "load and go" transport to the closest ROSC hospital with high quality resuscitation enroute.

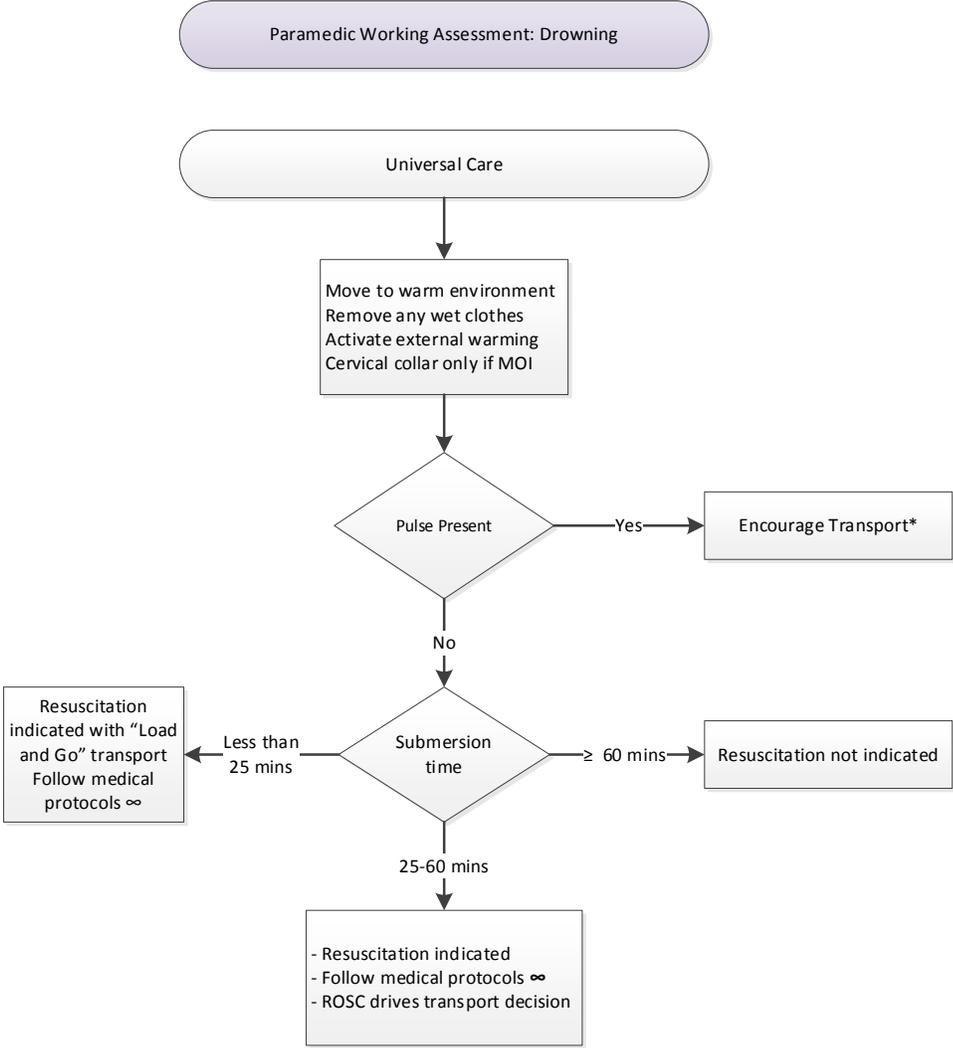
Key Documentation Elements
 1. Submersion time
 2. Type of liquid medium (water, other)
 3. Description of environment (tub, pool, open water)
 4. Surface water temperature PRN

Patient Safety Considerations
 *Asymptomatic drowning patients are at risk for severe cardiopulmonary collapse within 6 hours of submersion therefore encourage transport.

Notes:
 Submersion time is the most important factor with outcomes.
 Water temperature is not as important a factor in outcomes.

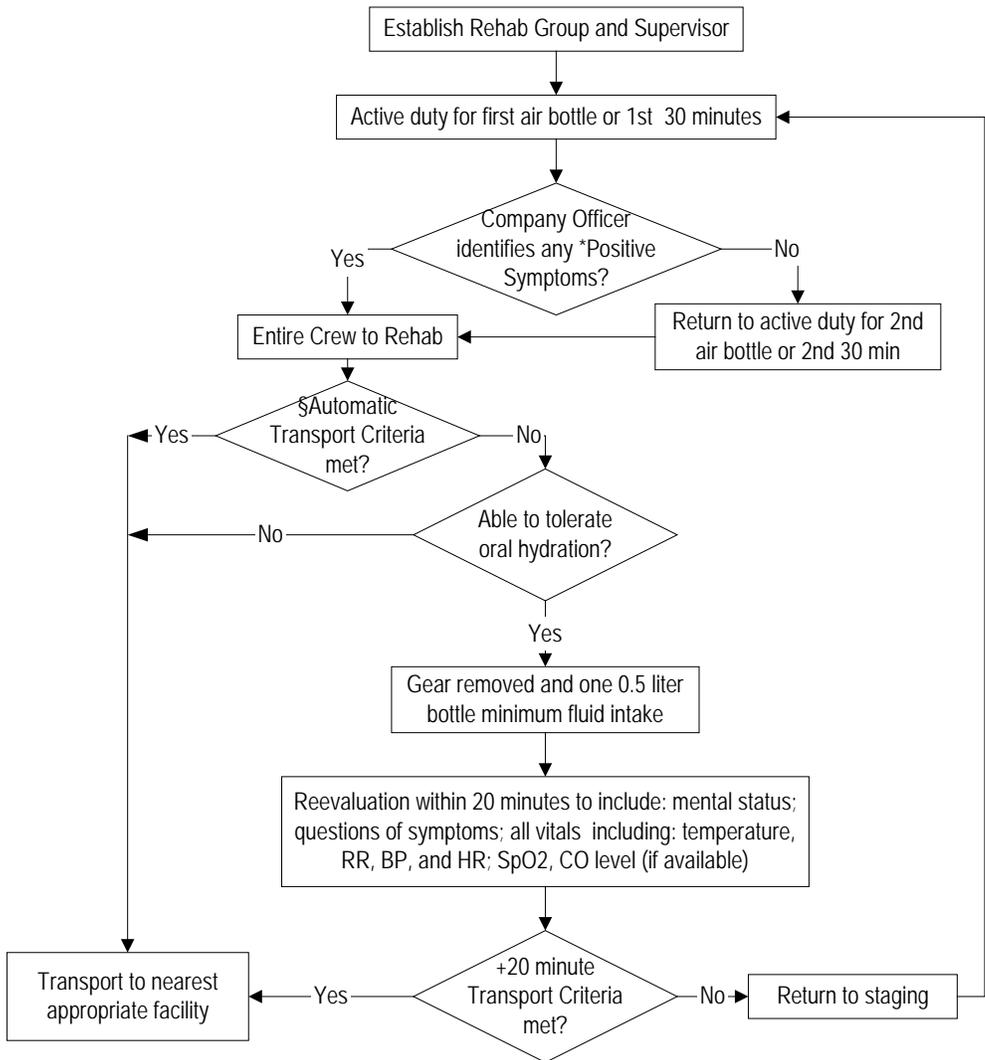
∞If trauma arrest is the primary consideration of a drowned patient, follow trauma arrest protocols.

Mechanical CPR device encouraged.





**Toxins & Environmental:
EMERGENCY INCIDENT REHABILITATION:
Practice Guideline**





**Toxins & Environmental:
EMERGENCY INCIDENT REHABILITATION:
Practice Guideline**

Transport Criteria Based on ALS Evaluation of Signs or Symptoms

*Positive Symptoms	§Automatic Transport Criteria	+20-Minute Transport Criteria
<ul style="list-style-type: none"> • Headache • Dizziness • Nausea/vomiting • Vision abnormalities • Paresthesias (numbness and/or tingling) 	<ul style="list-style-type: none"> • Chest pain • Confusion • Shortness of breath • Palpitations or irregular heart beat sensations 	<ul style="list-style-type: none"> • Any Automatic Transport Criteria • Any Positive Symptoms • HR 120 or greater • SBP 200 or greater OR 90 or less • T101 or greater OR 97 or less • RR 30 or greater • CO level greater than 10% • SpO₂ level less than 94

NOTES:

- After the first air bottle, the entire crew must report to rehab if any member reports positive symptoms. Symptomatic crewmembers must remain in rehab; other nonsymptomatic crewmembers are to report as directed by Group Supervisor.
- The Incident Safety Officer is responsible for assessment of the Company Officer for positive symptoms.
- Document according to department standards: date and incident identifier; names of personnel triaged; entrance and exit times; all vital signs documented; injuries and/or symptoms; disposition.
- Rehydration should continue after the incident with additional 1–2 liters consumed over the next 4 hours.



**Toxins & Environmental:
HYPOTHERMIA
Practice Guideline**

Patient Care Goals:

1. Maintain hemodynamic stability
2. Prevent further heat loss
3. Rewarm the patient in a safe manner
4. Appropriate management of hypothermia induced cardiac arrest
5. Prevent loss of limbs

Patient Presentation:

Inclusion Criteria

1. Patients may suffer from hypothermia due to exposure to a cold environment (increased heat loss) or may suffer from a primary illness or injury that, in combination with cold exposure (heat loss in combination with decreased heat production), leads to hypothermia
2. Patients with mild hypothermia will have normal mental status, shivering, and may have normal vital signs while patients with moderate to severe hypothermia will manifest mental status changes, eventual loss of shivering and progressive hemodynamic instability including bradycardia, hypotension, and decreased respiratory status; rescuer may need to clinically evaluate vital signs longer than standard patients (60 seconds).

Exclusion Criteria

1. Patients without cold exposure
2. Patients in cardiac arrest from a drowning event (see drowning protocol)

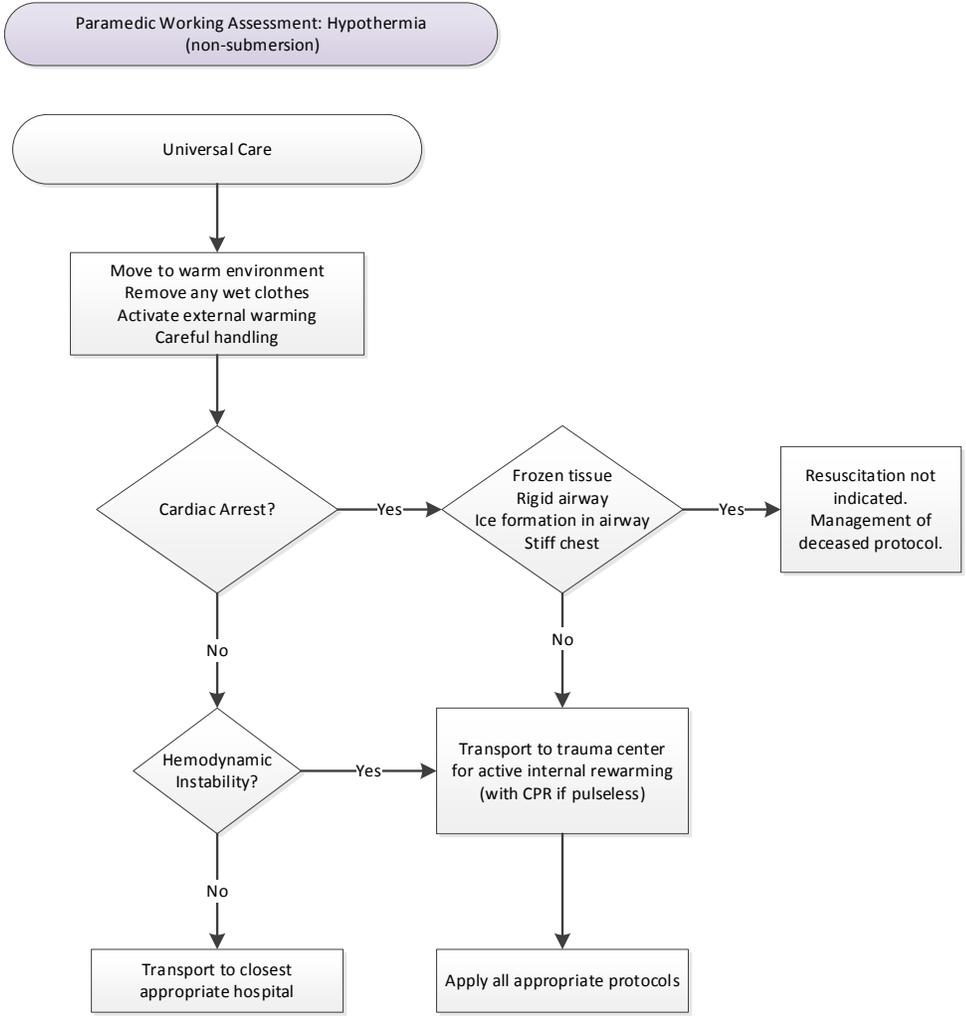
Quality Improvement:

Key Documentation Elements:

1. Reasons resuscitation not initiated PRN.
2. Signs of hemodynamic instability PRN.
3. Destination decision.
4. Patient use of alcohol/drugs or other contributing circumstances.

Patient Safety Considerations:

Devices that self-generate heat (e.g. heat packs) that are being utilized during the rewarming process should be wrapped in a barrier to avoid direct contact with the skin to prevent burns.





**Toxins & Environmental:
OPIOID OVERDOSE:
Medical Protocol**

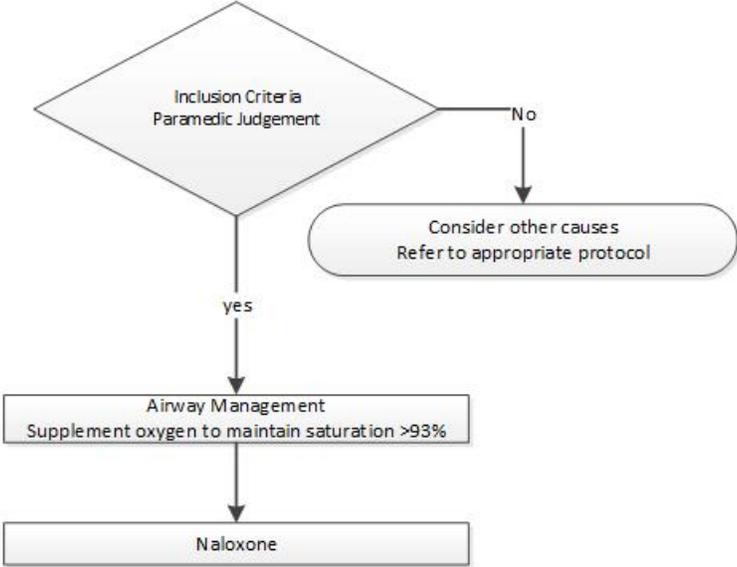
Patient Care Goals:
 1. Rapid recognition and intervention of a clinically significant opioid poisoning or overdose
 2. Prevention of respiratory and/or cardiac arrest

Patient Presentation:
Inclusion Criteria
 Patients of all age groups with access to opioids and known or suspected opioid use or abuse.
 Altered consciousness
 Inadequate respirations.

Opioid Reversal:
 Naloxone 0.1 mg/kg naloxone IV, IN, IM
 Max single dose 0.5 mg; titrated q 3 minutes until respiratory depression improves, not necessarily consciousness. No upper limit of naloxone.

Quality Improvement:
 Key Documentation Elements
 1. Glucose level

Patient Safety Considerations
 Patient at risk for agitation or violence after opioid reversal.
 Patient at risk for opioid withdrawal, vomiting or aspiration after naloxone.
 Ventilation is crucial; naloxone effects may be temporary so encourage transport to hospital.
 Non-invasive capnography may aid in early detection of hypoventilation and can be used in decision-making for subsequent naloxone dosing.
 Routine use of lights and sirens is not recommended during transport unless severe or refractory to EMS interventions



NOTES:

- There is no evidence of naloxone improving the chance of ROSC when a patient is in cardiac arrest due to a narcotic / opiate overdose. Focus should be on standard CPR/ACLS with good CPR and mechanical ventilation rather than attempts with naloxone.
- If the patient is suspected of being unconscious due to a narcotic overdose, restraining the patient may be considered before administering naloxone.
- If the patient can be aroused by painful stimuli enough to maintain an appropriate respiratory effort, the provider should opt for the stimuli versus naloxone. The goal is to only awaken those that cannot maintain an appropriate respiratory effort by non-invasive means i.e. painful stimuli.
- Alteration of consciousness is defined as responsive to pain or unresponsive on the AVPU scale.



**Toxins & Environmental:
UNIVERSAL POISONING CARE
Practice Guideline**

Patient Care Goals

1. Ensure patient is removed from hazardous material environments and appropriately decontaminated.
2. Ascertain type of agent by toxidrome or testing.
3. Identify antidote or appropriate treatment.

Patient Presentation:

1. Absorption
2. Ingestion
3. Inhalation
4. Injection

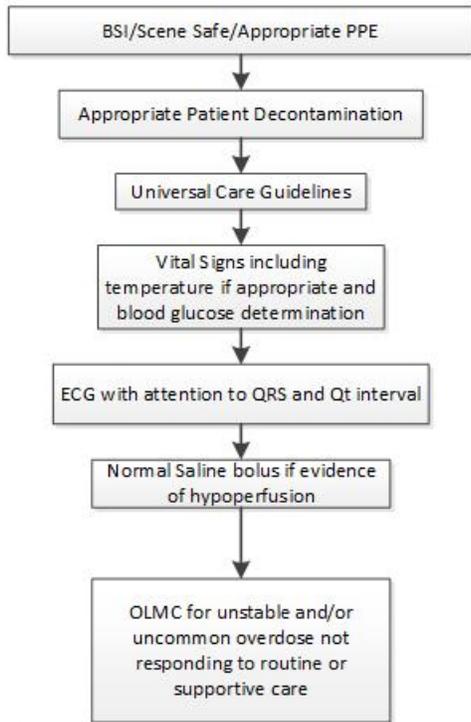
Quality Improvement:

Key Documentation Elements

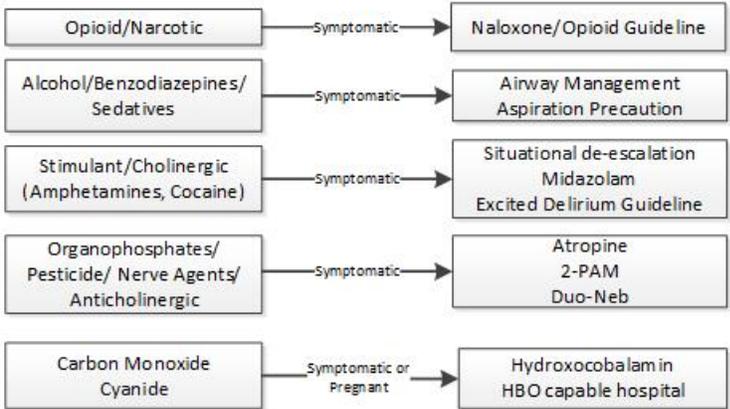
1. Possible etiology
2. Time of exposure
3. Response to treatment

Patient Safety Considerations

1. Maintain a high index of suspicion
2. Engage expert haz-mat resources for decontamination and assistance.
3. Ensure appropriate PPE for exposure.

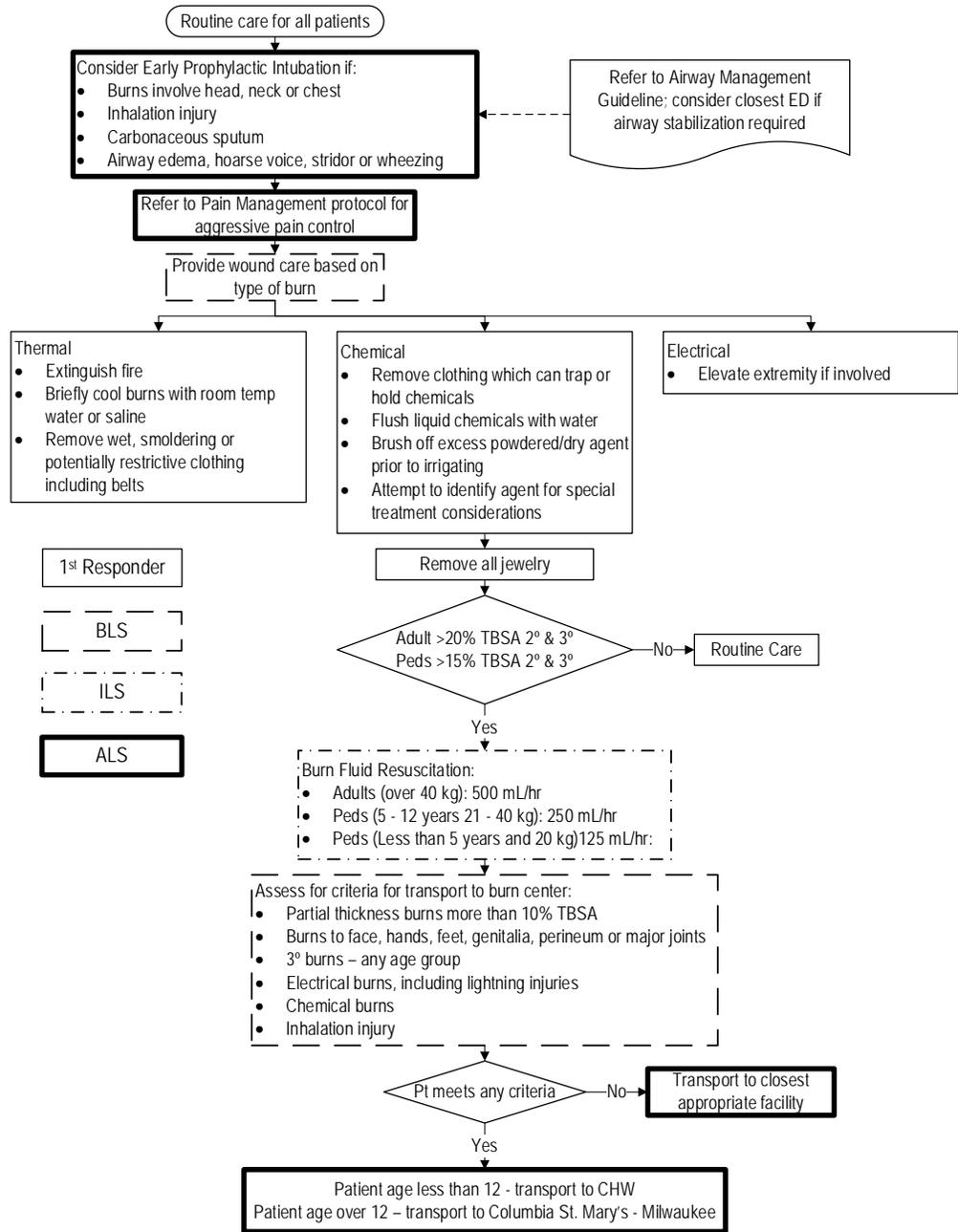


Common Toxidromes





**Trauma:
BURNS
Medical Protocol**



NOTES:

- Burn patients who also sustained major/multiple trauma must be transported to the Trauma Center.
- Patients who suffered electrical injury must have continuous ECG monitoring en route to the hospital.



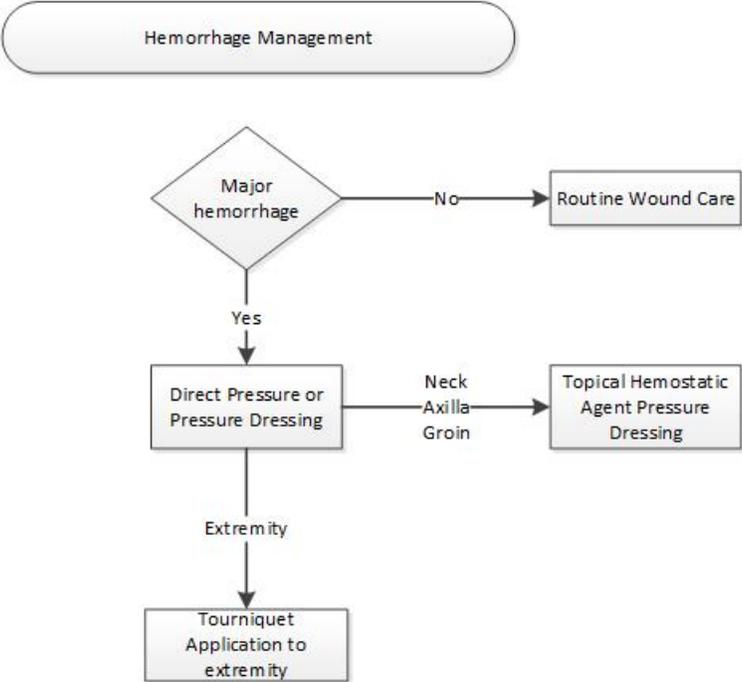
Trauma:
HEMORRHAGE CONTROL:
Practice Guideline

Patient Care Goals:
1. Minimize blood loss and avoid hemorrhagic shock.

Patient Presentation:
Inclusion Criteria
Major hemorrhage from an extremity, neck, axilla or groin.

Quality Improvement:
Key Documentation Elements
1. Extremity assessment after hemorrhage control.
2. Time documented for tourniquet application.
3. Traumatic causes requiring tourniquet or hemostatic agent referred to Level I/II trauma center.

Patient Safety Considerations:
Rapid escalation to definitive hemorrhage control (hemostatic agent or tourniquet) if direct pressure not working before shock ensues.



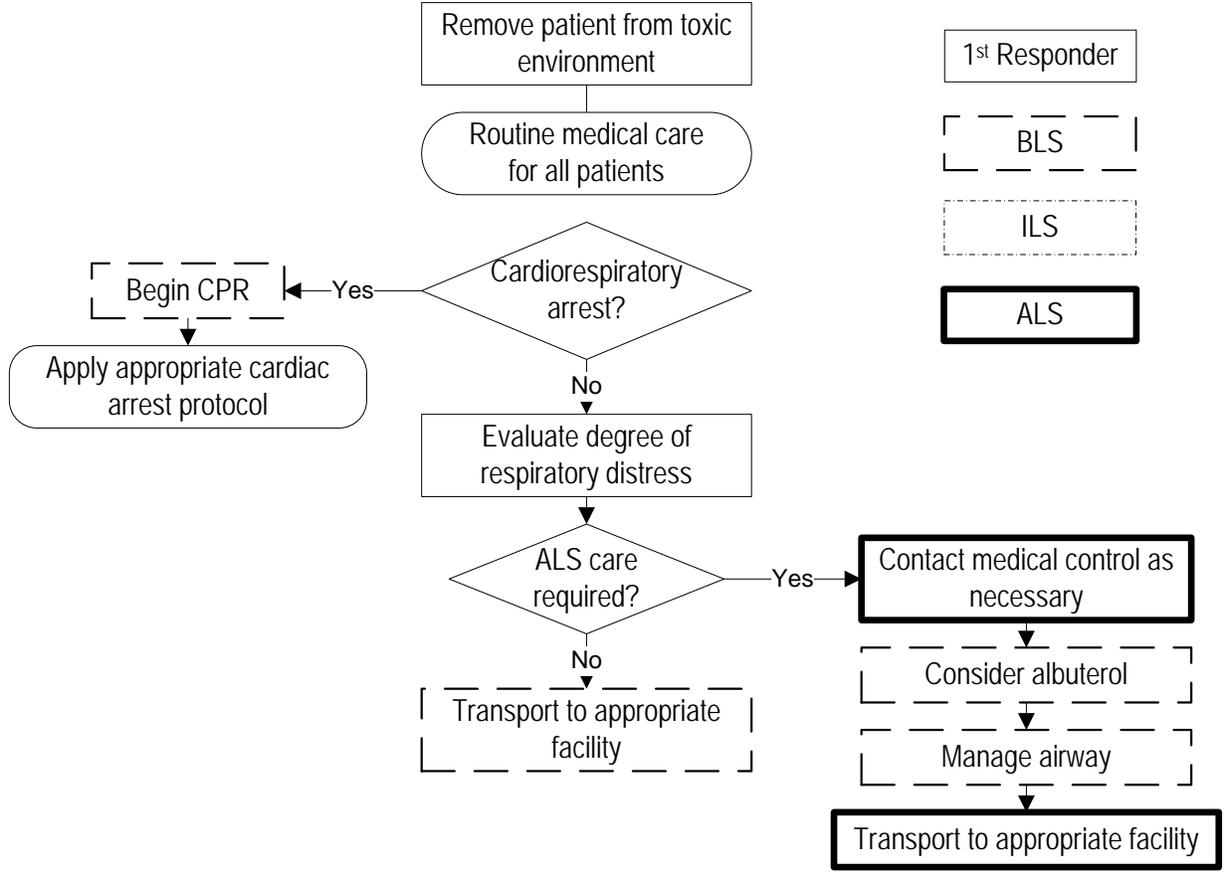
Notes:

- Direct pressure is the best method to control bleeding.
- Tourniquets should not be used on limbs with dialysis fistulas except in cases of traumatic penetration, amputation, or crush injury without response to direct pressure.

Direct pressure should be applied with a gloved hand and/or pressure dressing



Trauma:
INHALATION INJURY:
Practice Guideline



NOTES:

- Adult patients (≥ 8 years old) who suffered burns with an inhalation injury are to be transported to the Burn Center.
- All patients with suspected CO poisoning with altered mental status and *without* associated burns or trauma should be transported to the closest hyperbaric chamber.
- Pediatric patients (< 8 years old) who suffered burns with an inhalation injury are to be transported to Children's Hospital of Wisconsin.
- Pediatric patients (<8 years old) with suspected inhalation burn are to be transported to Children's Hospital of Wisconsin.
- If a fire victim has ROSC, hypotension or altered consciousness, evaluate for possibility of cyanide poisoning and consider administration of hydroxocobalamin (refer to Cyanide Poisoning protocol).



Trauma:
SPINAL MOVEMENT PRECAUTIONS (SMP):
Practice Guideline

Definitions:

Spinal Movement Precautions (SMP): An effort to minimize unnecessary movement of the spine through a keen assessment, attention to maintaining a neutral, anatomic position of the spine and the use of adjuncts such as cervical collar, well-padded long backboard, scoop stretcher, or a flat ambulance stretcher (which essentially is a padded backboard); the goal of SMP is to minimize the risk of **spinal cord injury (SCI)** from an unstable fracture and reduce the need for and harm of using a backboard when possible.

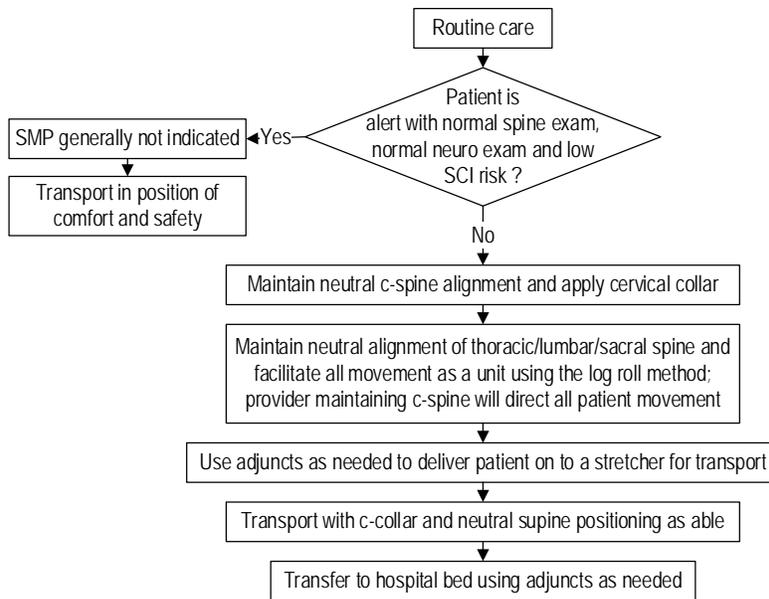
Alert patient: GCS 15, cooperative, clearly communicates, not distracted by pain, injury or circumstance and can focus on your instructions and exam; not intoxicated.

Normal spine exam: No midline bone pain or anatomic deformity ("step-off") and can subsequently passively rotate head 45 degrees to the left and right. An abnormal exam implies pain in the midline of the spine, palpable anatomic deformity of the spine, or an inability to passively rotate head 45 degrees to the left and right.

Normal Neurologic exam: Symmetrical hand squeeze, wrist extension, dorsiflexion, plantar flexion, gross sensation, NO numbness/weakness or priapism.

Low SCI Risk (Mechanism or Patient): EMS judgment of very low speed impact (e.g. minor MVC or ground level fall). Alert patients age 3 to 65 with no neurologic findings or no spine pain based on EMS judgment; ambulatory patients at scene; blunt trauma patients not meeting Level I or II trauma center evaluation criteria.

High SCI Risk (Mechanism or Patient): Blunt trauma meeting trauma transfer criteria for a Level I or II trauma center; penetrating trauma ONLY if an abnormal spine or neurologic exam AND transport not delayed by applying SMP (penetrating trauma to neck or torso alone does not make the patient high risk); age less than 3 or greater than 65 may be considered high risk when considering other major trauma factors.





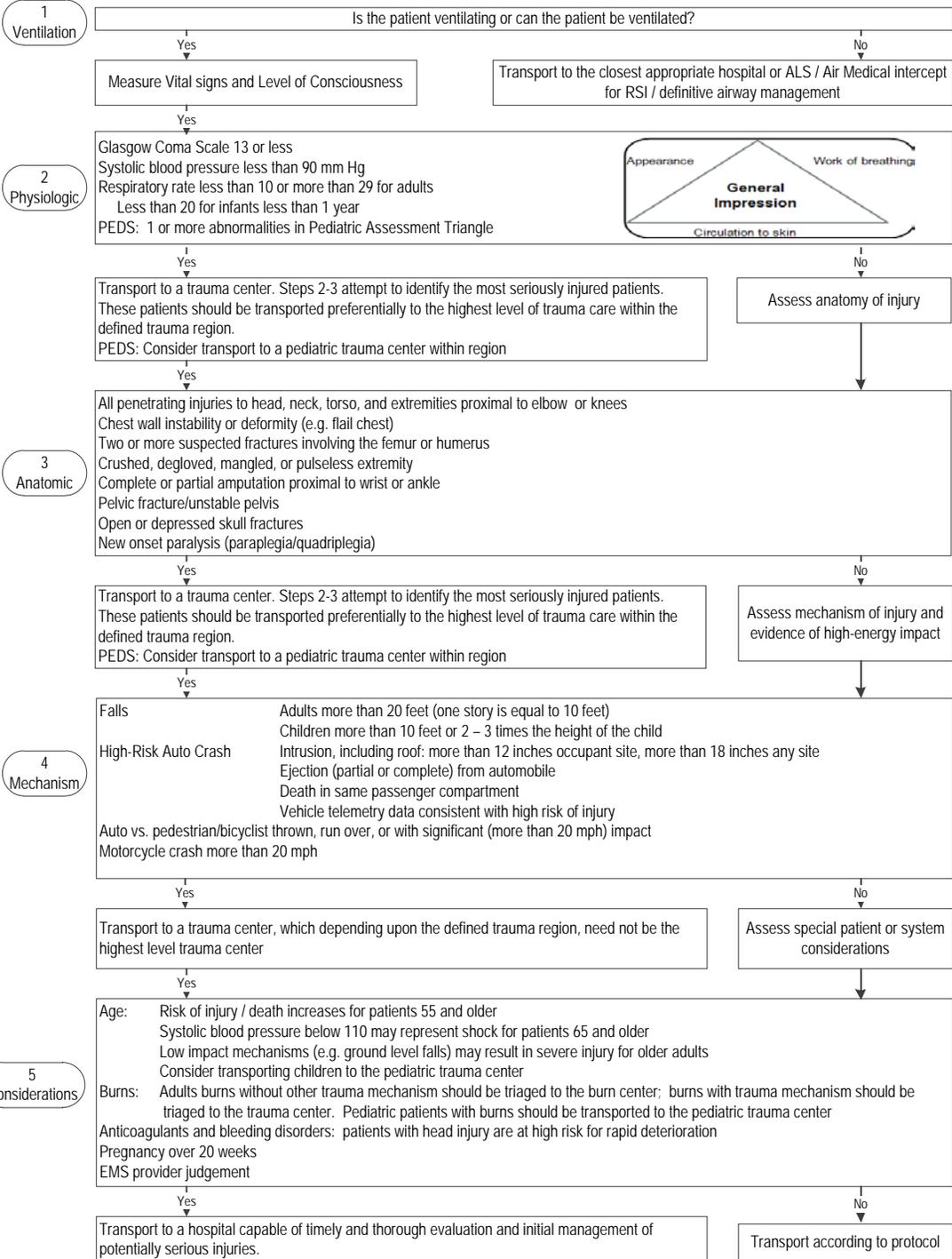
Trauma:
SPINAL MOVEMENT PRECAUTIONS (SMP):
Practice Guideline

NOTES:

- Do not strap or tape patient's head to the cot.
- It is mandatory to document the initial neurologic exam and upon each patient transfer (e.g. on to backboard/scoop/stretchers, prior to movement onto hospital bed and once transfer to hospital bed occurs). A simple one-line statement such as "patient's neurologic exam remained unchanged throughout all transfers" would suffice.
- Ideally, the backboard or scoop stretcher would be used as an adjunct if multiple extrication steps are needed in order to move a patient to a stretcher. Ambulatory patients or those patients with minor spine pain seated in a vehicle or at the scene may be gently assisted directly to an ambulance stretcher brought directly to them to minimize movement. EMS will make every effort to minimize movement to the spine in this process. A "short board" or K.E.D may be used as an extrication tool. It does not provide benefit and should not be used when implementing spinal movement precautions.
- Pediatrics age 3 to 8 that otherwise fit the low risk criteria may not require SMP based on the EMS provider's judgment.
- Hospital inter-facility transfers should not require a backboard although they will often require SMP; careful coordinated movement from hospital to ambulance stretcher using a scoop stretcher or slide board should suffice; ambulance stretcher straps should be secured.



Trauma:
TRAUMA FIELD TRIAGE GUIDELINES:
Practice Guideline





Trauma:
TRAUMA MANAGEMENT – UNIVERSAL:
Practice Guideline

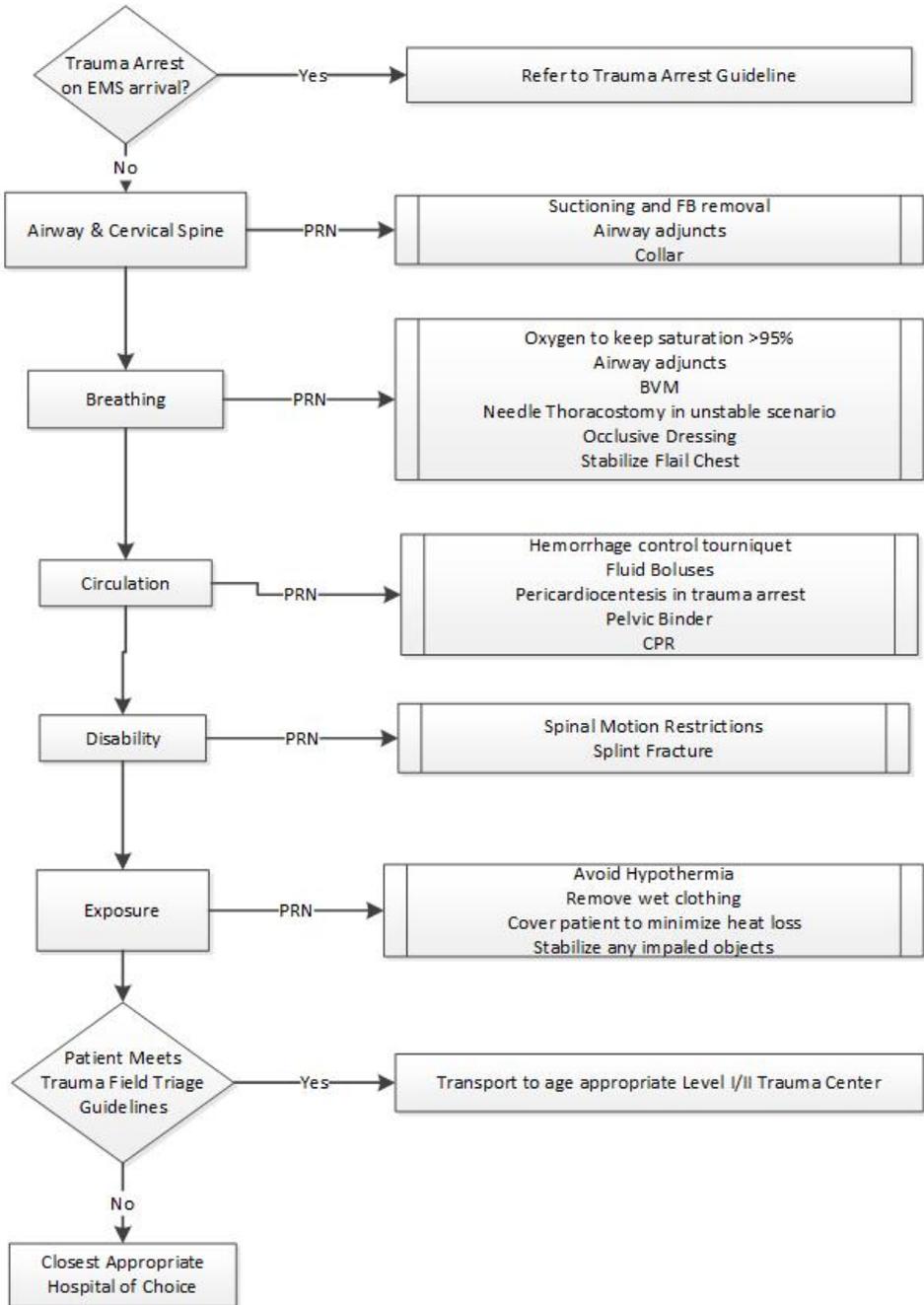
Patient Care Goals:
 1. Rapid assessment and management of life-threatening injuries.
 2. Safe movement and transport of injured patients.

Patient Presentation:
 Inclusion Criteria
 All patients with injury from mechanical trauma.

ABDCE Primary Survey Approach and PRN Strategies:
 Screen and treat for life-threatening injuries PRN based on assessment and injury.
 Normal Saline Bolus 20 ml/kg max of 1 liter; may be repeated PRN if shock continues.
 Pelvic Binder in blunt hypotensive trauma.
 Use IO in conscious patients who are in shock if IV not successful; do not delay IO use.
 Identify patients that meet referral criteria to Level I/II trauma center and minimize scene time for these patients to 10 minutes or less.
 Vital signs, secondary assessment and treatment of injuries not life-threatening can be done enroute or delayed prn.

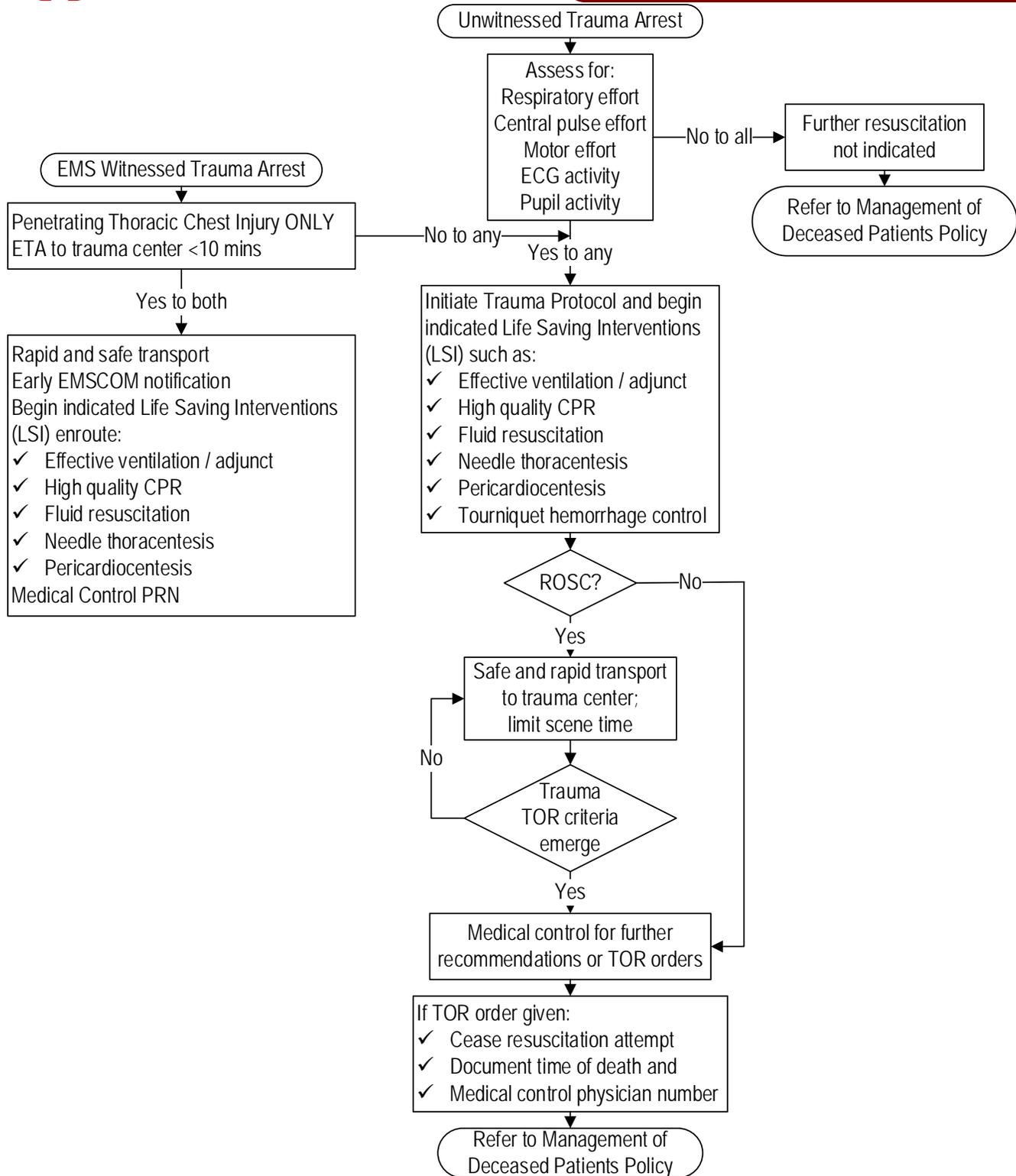
Quality Improvement:
 Key Documentation Elements
 1. Exam findings to support treatment decisions.
 2. Scene time <10 mins for major trauma PRN.
 3. Appropriate hospital destination.

Patient Safety Considerations:
 Routine use of lights and sirens is not recommended during transport unless severe or refractory to EMS interventions.





Trauma:
TRAUMATIC CARDIAC ARREST - SUDDEN:
Practice Guideline





Trauma:
TRAUMATIC CARDIAC ARREST - SUDDEN:
Practice Guideline

NOTES:

- **NO ACLS drugs indicated** (epi, amiodarone, calcium, bicarb) unless ordered by medical control.

Termination of Resuscitation (TOR) Criteria for Traumatic Arrest:

- Less than 20 weeks pregnant (fundus at umbilical height)
- Not believed related to environmental hypothermia
- High quality CPR unsuccessful
- Life Saving Interventions (LSI) unsuccessful
- ETCO2 10 mm Hg or less
- No agonal breaths
- No central pulses
- No muscle movement
- No ECG activity
- Fixed, non-reactive pupils

Trauma Arrest LSI and Decision to Transport Summary Matrix

Mechanism	Site	TOR Criteria Met?	Start LSI?	Call Med Control?	Transport to Trauma Center?
Penetrating	Thoracic chest or back; above abdomen	No	Yes	Yes	Perhaps if time from arrest to DELIVERY at trauma center is absolutely <10 min. Logistically, this would be an exceptionally rare occurrence.
Penetrating	Multi-site	No	Yes	Yes	Transport generally not recommended unless ROSC develops.
Blunt	Any	No	Yes	Yes	Transport generally not recommended unless ROSC develops.