

Prehospital Patient Care Protocols

REVISED JUNE 2015

SWVEMS Council Prehospital Care Protocols

Index

CARD COLOR KEY

RED - Cardiac Emergencies

GREEN - Medical Emergencies

YELLOW - Trauma Emergencies

BLUE - Medications

CREAM - Communication Directory

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INTRODUCTION

This operational protocol has been designed to serve as a guide for agencies in providing pre-hospital care. It also should serve as a guide to nurses and physicians who are involved in the delivery of Advanced Life Support through pre-hospital personnel. At the time of writing this manual, the protocols were written with current medical treatment in mind. However, given the complexity of medical care, these protocols should not be expected to provide the definitive care needed by every patient. These are guidelines that can be used to support patient care in a majority of cases, but cannot replace careful assessment of each patient and the specific setting in which they present.

Physicians that will be rendering treatment orders are encouraged to use this manual as a source for such orders, with the realization that many times, once contact has been made with a physician and a full description of the circumstances of the patient are revealed, certain treatments may differ from these protocols. It certainly remains the on-line physician's prerogative to deviate from these protocols.

A "Reference Table" and "Algorithm Flow Chart" format has been selected for these protocols which will facilitate their use by all EMS providers. A provider need only reference the column of procedures headed by his/her level of training and follows them in sequential order. Symbols used in these protocols are defined as follows:

INTRODUCTION (Continued)

INTRODUCTION (Continued)

“A”-Virginia First Responder

“B”-Virginia EMT-Basic

“J”-EMT-Enhanced

“T”-Virginia EMT-Intermediate

“E”-EMT-Paramedic

“S” - Standing Order, to be performed prior to contact with on-line Medical Control.

“O” - On-line Order, to be performed with approval of on-line Medical Control.

In some cases, “O” procedures may be performed IF Medical Control cannot be contacted via radio or telephone and with the OMD’s prior approval. Also, please note that when dealing with critical patients, the receiving facility should be contacted as early as possible. In the event that NO means of communication with Online Medical Control is available and an “O” procedure is performed the provider must submit all documentation to the following for review: agencies OMD, agency supervisor, and Southwest Virginia EMS Council’s Performance Improvement Committee.

We hope that this manual will help to provide some degree of standardization for the Southwest Virginia area, and will help to define the level of care that should routinely be given by pre-hospital personnel. Any questions or concerns about this manual are welcomed, and should be directed through the Council Office at 276-628-4151.

INTRODUCTION (Continued)

INTRODUCTION (Continued)

SKILLS FOR CERTIFICATION LEVELS

Please refer to the Virginia Office of EMS Medication schedule and Procedures schedule, which can be found on the OEMS website. These schedules are intended to be used as operational maximums and training minimums, as per each agency's OMD. The Agency OMD will determine which skills on this checklist will be permitted for each certification level.

INTRODUCTION (Continued)

Advanced Life Support Assist / Intercept Guidelines

Patients with evidence of the following shall indicate **immediate dispatch of ALS if available:**

I. AIRWAY / RESPIRATORY EMERGENCIES:

A. Obstructed Airway

B. Breathing which is:

1. ABSENT 2. SEVERELY Labored

3. Rate above 40 / below 10

C. Skin cyanotic (blue color)

II. CIRCULATORY / CARDIAC EMERGENCIES:

A. Pulse which is:

1. ABSENT 2. IRREGULAR (new onset)

3. Very weak 4. Rate above 160 / below 40

B. Blood Pressure: - above 200/120 or below 90/60

C. SEVERE Chest Pain / Pale, clammy skin

D. Severe, Uncontrolled bleeding

III. LEVEL of CONSCIOUSNESS:

A. UNRESPONSIVE

B. Decreased - below normal for Pt.

(I.e. overdose, diabetic, stroke)

IV. TRAUMA ***

- A. Severe injury to the HEAD, CHEST, or Abdomen
- B. Multiple fractures
- C. MVA with: 1. Entrapment 2. Ejection from vehicle
- 3. Multiple injuries 4. Pedestrian at >20 mph or
- 5. Death of same vehicle occupant
- D. Falls greater than 15 feet.

*** Should also indicate activation of Aeromedical helicopter if more than 15 minutes from Trauma Center

V. INDEX OF SUSPICION:

ALS should be dispatched for any patient who sounds or looks "Bad"
- as if death may be imminent!

DO NOT WAIT

For ALS at the scene . . . Meet them enroute.

AIR MEDICAL TRANSPORT GUIDELINES

If Ground Transport time to a Trauma Center is greater than Air Transport time and patient meets the following; the closest appropriate Air Medical Transport should be utilized.

Adult Patient	Pediatric Patient
	All pediatric patients with Pediatric Trauma Scores ≤ 6 * See pediatric trauma score page 50
Respiratory <ul style="list-style-type: none"> • Bilateral thoracic injuries • Significant unilateral injuries in pt's >60 (e.g. pneumothorax, hemo-pneumothorax, pulmonary contusion, >5 rib fractures) • Significant unilateral injuries in patients with pre-existing cardiac and/or respiratory disease • Respiratory compromise requiring intubation • Flail chest 	Respiratory <ul style="list-style-type: none"> • Bilateral thoracic injuries • Significant unilateral injuries in patients with pre-existing cardiac and/or respiratory disease • Flail chest
CNS <ul style="list-style-type: none"> • Unable to follow commands • Open skull fracture • Extra-axial hemorrhage on CT, or any intracranial blood • Paralysis • Focal neurological deficits • GCS ≤ 12 	CNS <ul style="list-style-type: none"> • Open skull fracture • Extra-axial hemorrhage on CT Scan • Focal neurological deficits
Cardiovascular <ul style="list-style-type: none"> • Hemodynamic instability as determined by the treating physician • Persistent hypotension • Systolic B/P (<100) without immediate availability of surgical team 	
Injuries <ul style="list-style-type: none"> • Any penetrating injury to the head, neck, torso or extremities proximal to the elbow or knee without a surgical team immediately available. 	Injuries <ul style="list-style-type: none"> • Any penetrating injury to the head, neck, chest abdomen or extremities proximal to the knee or elbows without a surgical team immediately available

<ul style="list-style-type: none">• Serious burns/burns with trauma (see below)• Significant abdominal to thoracic injuries in patients where the physician in charge feels treatment of injuries would exceed capabilities of the medical center	<ul style="list-style-type: none">• Combination of trauma with burn injuries• Any injury or combination of injuries where the physician in charge feels treatment of the injuries would exceed the capabilities of the medical center
Special Considerations <ul style="list-style-type: none">• Trauma in pregnancy (\geq 24 weeks gestation)• Geriatric• Bariatric• Special needs individuals	

DO NOT WAIT

For Air Medical at the scene . . . Meet them enroute.

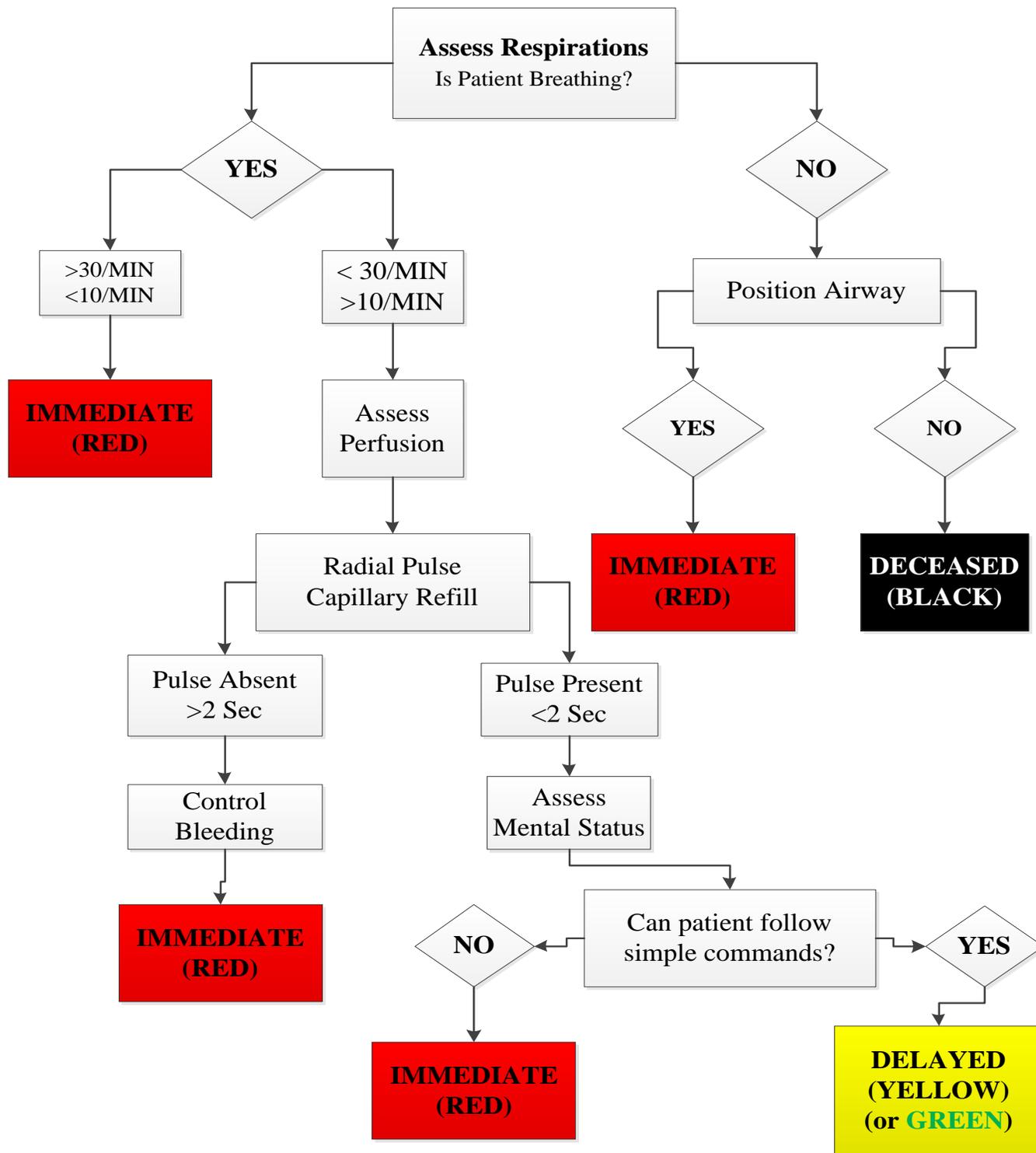
MASS CASUALTY INCIDENT RESPONSE OUTLINE

Use "5S" approach.

1. Scene safety survey.
2. Size up-how many patients? How severe?
3. Send info to dispatch and initial mutual aid request as needed.
4. Setup-establish incident command including triage officer.
5. S.T.A.R.T. Triage

S.T.A.R.T. Simple Triage and Rapid Treatment

Remember **RPM** (**R**espirations, **P**erfusion, **M**ental Status)



Secondary Triage

Immediate (Red Tag)

Life threatening injuries with reasonably high probability of survival if treated and transported immediately.

Airway compromise and respiratory distress
Uncontrolled external bleeding or suspected severe internal bleeding
Non-catastrophic head injuries with altered LOC
Open chest or abdominal wounds
Shock
Severe medical problems
Thermal injury to the respiratory tract
3rd degree burns to 25%-50% BSA
Unconscious in absence of obvious head injury
Hypothermia

Delayed (Yellow Tag)

Potentially life threatening or severely debilitating injuries which can withstand a slight delay. These patients could deteriorate into Immediate, necessitating frequent reassessment.

Multiple/severe fractures
Back injuries with or without spinal cord damage
3rd degree burns to <25% BSA
Eye injuries
Significant blunt or penetrating trauma in the absence of immediate criteria

Minor (Green Tag)

Non life threatening injuries and requiring a minimum of care without deteriorating.

Minor fractures
Minor burns
Lacerations without significant blood loss

Deceased (Black Tag)

Unresponsive with no circulation or respirations: unable to support life.

Catastrophically injured patients not yet deceased with low probability of survival even with immediate treatment and transport should not be tagged.

Unresponsive with severe head injury
3rd degree burns to >50% BSA
Crushed chest injury (traumatic asphyxia)

PATIENT ASSESSMENT GUIDELINES

EVALUATE THE SCENE

Hospital personnel must rely on the information that you can give them regarding a scene. You also owe it to yourself and others (co-workers and the public) to continually assess each scene for potential dangers to you and them, as well as the patient. While on the scene you should assess mechanisms of injury, the total number of victims, and what resources are immediately available versus those that may be needed.

Specific Hazards that are most commonly found:

- Fire
- Electrical charges
- Hazardous Materials
- Traffic
- Severe Weather
- Weapons (You should always have law enforcement officers secure this type of scene before entering!!!)

Initial Patient Assessment

A - AIRWAY

ALWAYS ensure an open AIRWAY. Many simple techniques are available to deal with the compromised airway. ALWAYS consider mechanisms of injury and the POTENTIAL OF CERVICAL SPINE INJURY. If the potential of spinal injury exists, appropriate measures to stabilize this are mandated with the initiation of airway care.

B - BREATHING

Once assured that a patent airway is present, evaluation of BREATHING comes next. ALL PATIENTS must have the proper amount of air to enter the lungs. If spontaneous ventilation is not present, or is not adequate, artificial ventilation or assisted ventilation is often life-saving. After ventilations are effectively dealt with advanced airway placement may be considered for the situation based on patient's condition, and the pre-hospital care provider's skill level. Advanced airway use should almost always be considered in the patient with a respiratory rate of less than 10 or greater than 30. With assessment of breathing it is also important to evaluate the chest by exposure, inspection, and auscultation of breath sounds, with palpation of the chest wall most important if trauma has occurred.

C - CIRCULATION/BLEEDING

Check for the presence of a pulse; remember that the presence of a carotid pulse indicates a systolic of approximately 60, the presence of a femoral pulse means a systolic BP of 70, and the presence of a radial indicates a systolic BP of 80 or higher. In the absence of a palpable pulse, chest compressions should be started at a rate and depth appropriate to the patient. Refer to appropriate protocol. If a pulse is present quickly evaluate the condition for the skin to include capillary refill.

Attempt to control all major bleeding sources immediately.

D - DISABILITY

Reassess the level of consciousness by using the AVPU scale:

A - Alert

V - Verbal stimuli produce a response

P - Painful stimuli produce a response

U - Unresponsive even to painful stimuli

E - EXPOSE / ENVIRONMENT

Expose the patient and remove clothing to evaluate the patient entirely, so that any injuries can be properly examined. With this exposure remember that it is important to maintain normal body temperature and prevent hypothermia.

IF EARLY OR IMMEDIATE TRANSPORT IS INDICATED, IV's and Secondary Survey are to be completed enroute to the hospital!!!!

Initial Patient Assessment

	A	B	J	I	E
Proper Body Substance Isolation	S	S	S	S	S
Evaluate the scene: Safety Number of Patients Mechanism of Injury Nature of Illness	S	S	S	S	S
Assess Airway maintain airway as certified.	S	S	S	S	S
Asses Breathing if inadequate assist ventilations	S	S	S	S	S
Assess Circulation	S	S	S	S	S
If no life-threatening injuries or conditions perform Secondary Assessment.	S	S	S	S	S

Secondary Assessment

Head to Toe examination

Neurological Baseline

Pupil Response

Eye Opening

Verbal Response

Motor Response

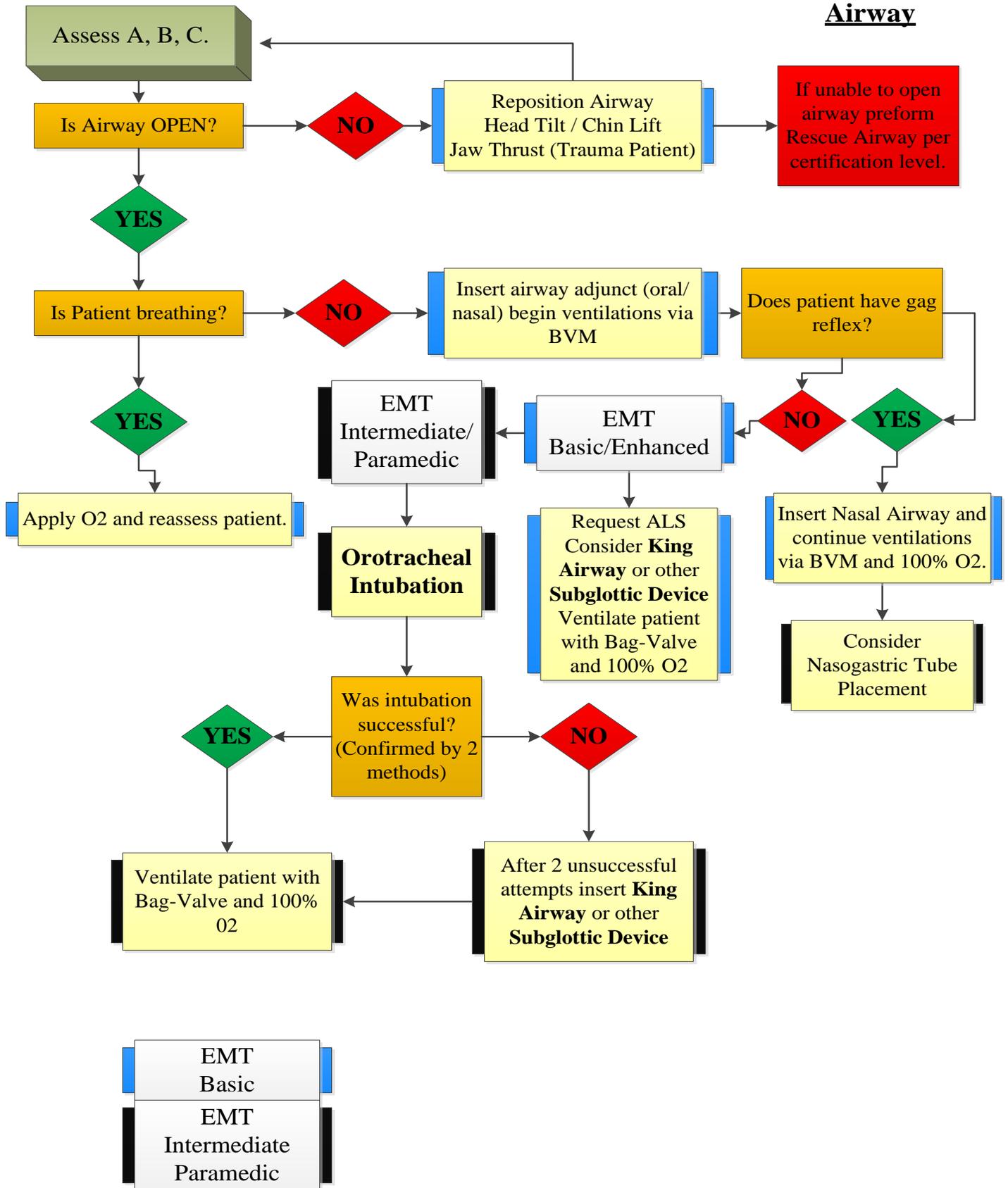
Stabilization of Fractures

Control of Minor Bleeding

Obtain S.A.M.P.L.E. History

** Continuous reassessment of the patient is important. Monitoring of Vital Signs every 5 minutes during transport is important for the critically ill or injured patient.

Airway



Subglotic Airway (King Airway)

	A	B	J	I	E
Assess Airway and insure airway is open use head tilt chin lift if no trauma / use modified jaw thrust if trauma is suspected.	S	S	S	S	S
If C-Spine injury is suspected control C-Spine.	S	S	S	S	S
Assess breathing. If patient is not breathing (apneic) begin BVM ventilation.	S	S	S	S	S
Insert Oral airway.	S	S	S	S	S
If no gag reflex choose appropriate size KING Airway (4' to 5' choose #3 yellow top, 5' to 6' choose #4 red top, 6' over choose #5 purple top).	S	S	S	S	S
Insert King Airway.		S	S	S	S
Insure proper placement and use secondary device to confirm placement (ETCO2, BAAM, or EID)			S	S	S
Secure King Airway and Ventilate patient with BVM and 100% O2.		S	S	S	S

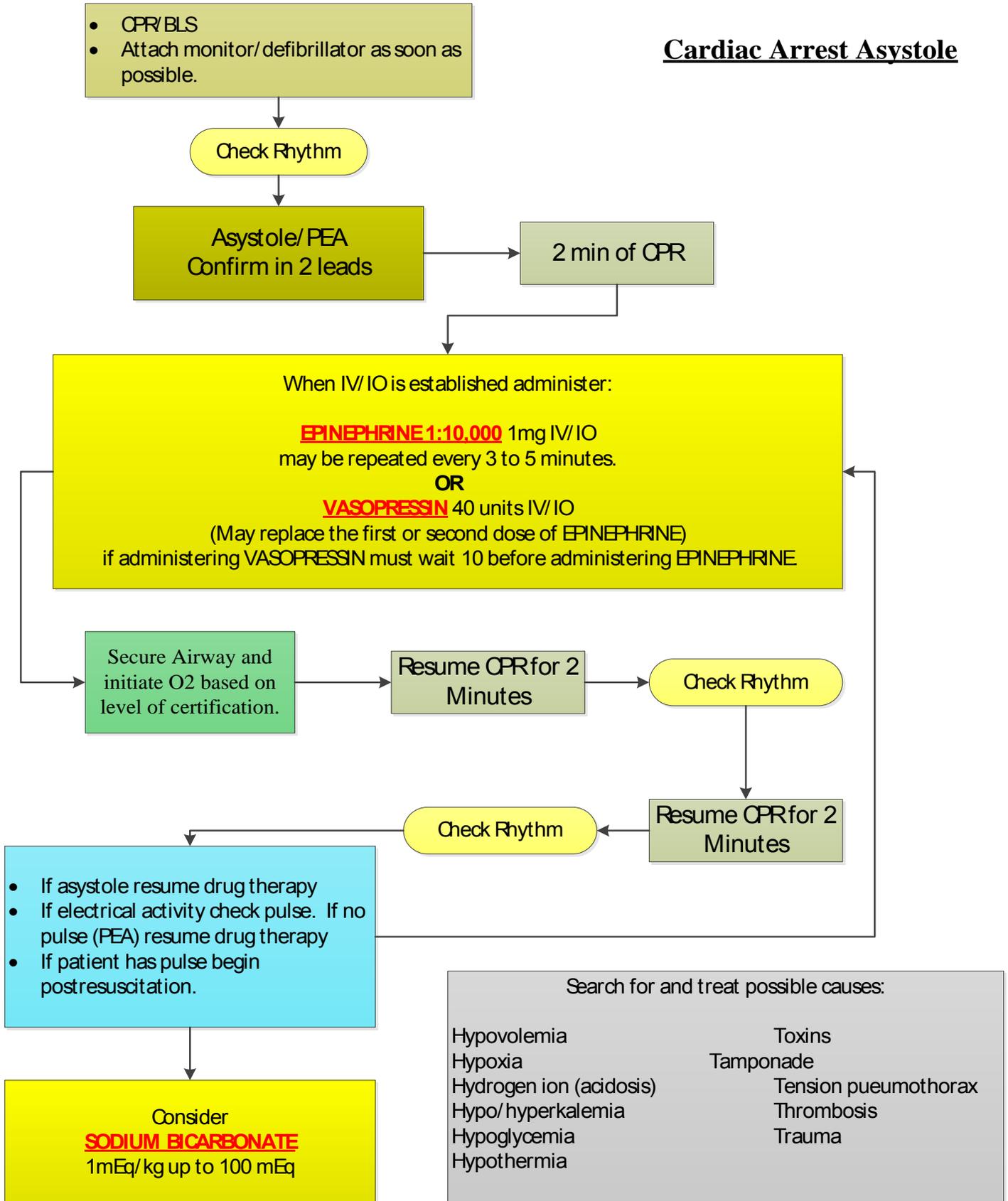
(*) Requires additional training and approval by agency OMD.

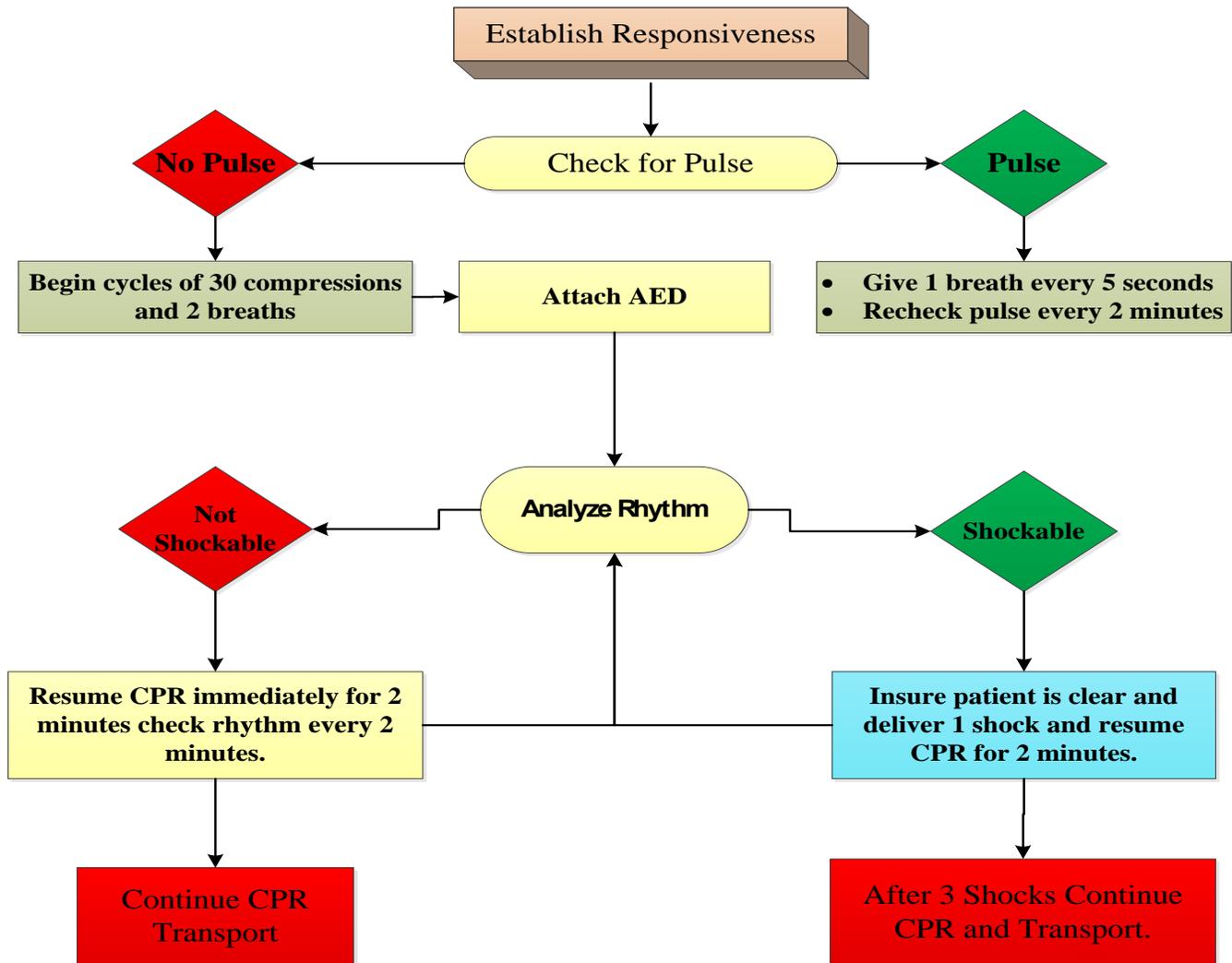
(O) Requires Online Medical Control order.

Cardiac

RELATED EMERGENCIES

Cardiac Arrest Asystole



Cardiac Arrest-Unknown Rhythm

BLS Crew should request ALS assistance as soon as possible. BLS Crew should not delay transport awaiting ALS assistance.

If patient is in full arrest BLS should request ALS assistance as soon as possible.

BLS crew should not wait on scene for ALS crew meet them enroute to the hospital.

Medical-Bradycardia

BRADYCARDIA
Heart rate <60 and inadequate for clinical condition

- Maintain patient airway and assist breathing as needed and Administer O2.
- Monitor ECG (identify rhythm)
- Establish IV

Does patient have signs or symptoms of poor perfusion?

NO

Observe/Monitor patient
(at any time patient show sign or symptoms go to **YES**.)

YES

Administer **ATROPINE**
If atropine is ineffective:
Transcutaneous pacing
Or
DOPAMINE
Or
EPINEPHRINE

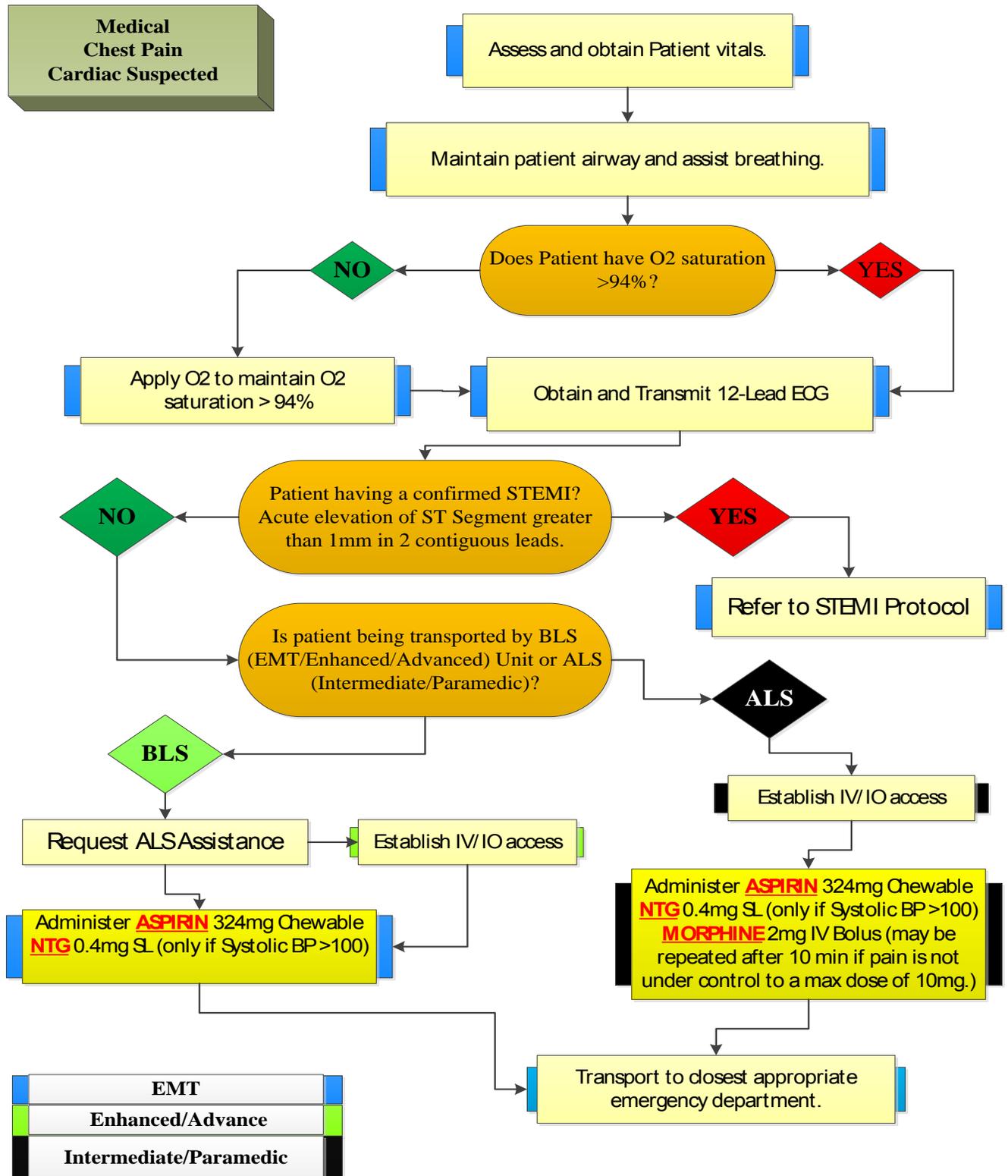
Transcutaneous Pacing
Use with out delay for high-degree block
(type II 2nd degree or 3rd degree block)

ATROPINE 0.5mg IV may be repeated to max dose 3mg
(Consult Medical Control)

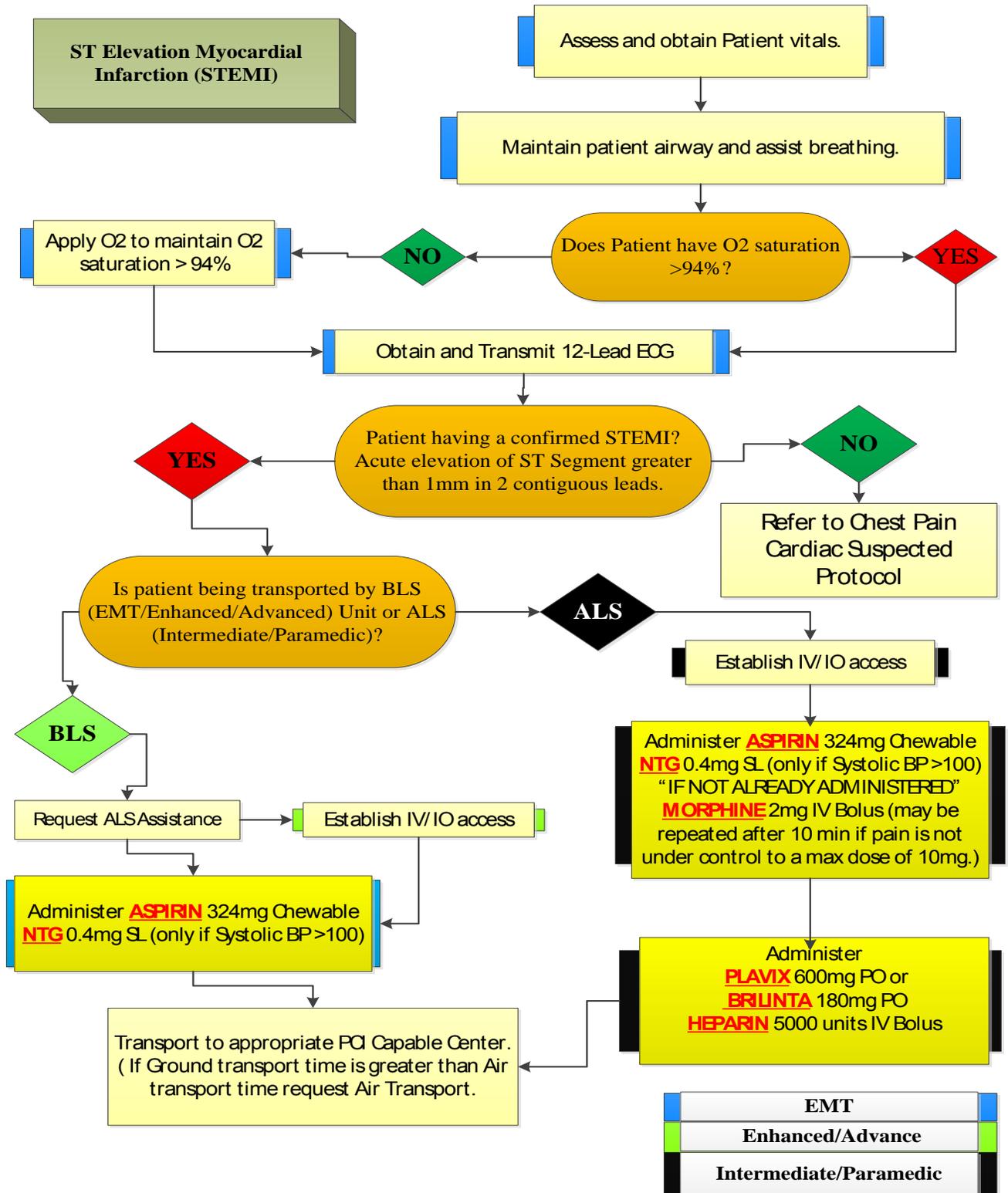
DOPAMINE Refer to Medication Section Pg. 64 for dosage.
(Consult Medical Control)

EMT Basic
EMT Enhanced
EMT Intermediate/Paramedic

Medical Chest Pain/Cardiac Suspected



Medical STEMI



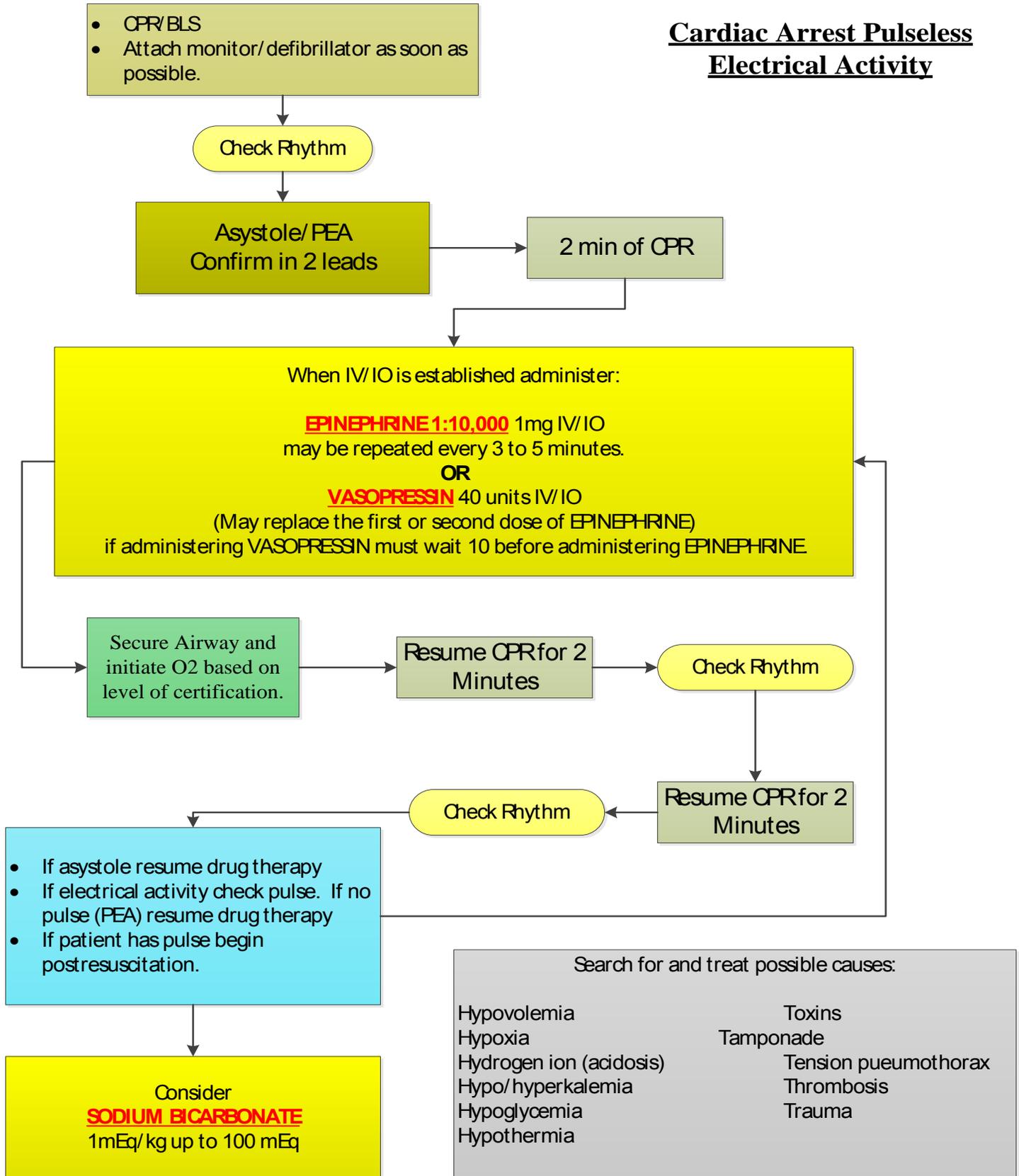
Medical-Pulmonary Edema/CHF

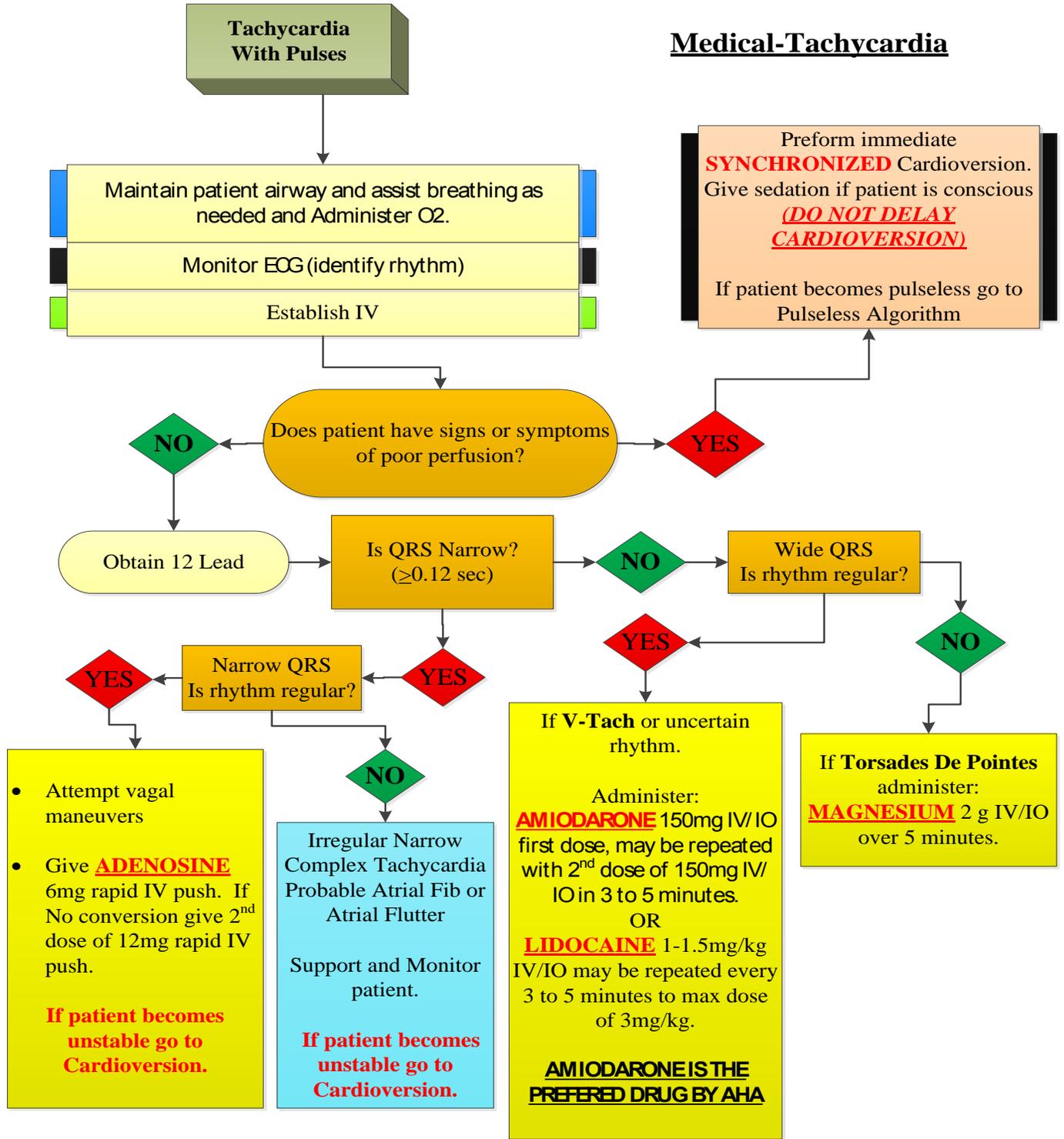
	A	B	J	I	E
Perform initial assessment.	S	S	S	S	S
Secure airway and initiate O2 based on level of certification.	S	S	S	S	S
Establish IV/IO.			S	S	S
Apply and monitor ECG.				S	S
If systolic BP>100 mm Hg, administer Nitro 0.4 mg via spray or tablet, may repeat every 5 minutes X 2 if systolic BP remains >100 mm Hg and patient continues to have chest pain for max of 3.			S	S	S
Lasix 20-80 mg IV is systolic BP>100 mm Hg.				S	S
If systolic BP<90 mm Hg, titrate Dopamine to raise systolic BP to 100-110 mm Hg.				O	O
Transport and contact Medical Control as soon as possible.		S	S	S	S
Consider CPAP		*	S	S	S

(*) Requires additional training and approval by agency OMD.

(O) Requires Online Medical Control order.

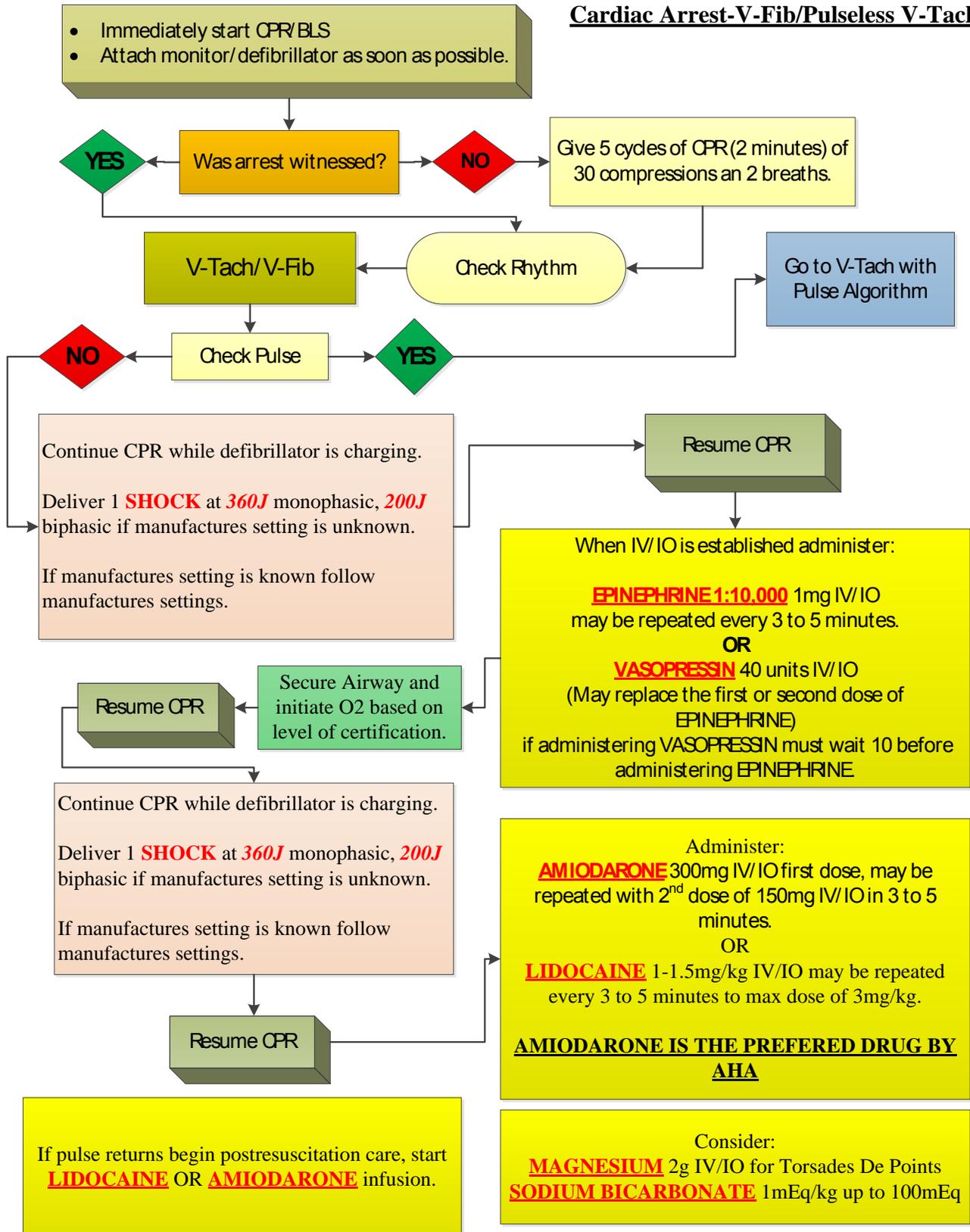
Cardiac Arrest Pulseless Electrical Activity





EMT Basic
EMT Enhanced
EMT Intermediate/Paramedic

Cardiac Arrest-V-Fib/Pulseless V-Tach



MEDICAL

RELATED EMERGENCIES

Medical-Allergic Reaction/Anaphylaxis

Allergic Reaction

	A	B	J	I	E
Perform initial assessment.	S	S	S	S	S
Secure airway and initiate O2 based on level of certification.	S	S	S	S	S
Establish IV/IO.			S	S	S
Apply and monitor ECG.				S	S
Administer Diphenhydramine (Benadryl) 25mg IV/IO.			S	S	S
If patient is wheezing administer Albuterol 2.5mg nebulized.		*	S	S	S
Transport and contact Medical Control as soon as possible.		S	S	S	S

Anaphylaxis

Anaphylaxis is a generalized allergic reaction involving more than one body system that is potentially life threatening. Aggressive and rapid airway management may be required for patients with Anaphylaxis. If life threatening systemic reaction is present (hypotension, angioedema, laryngoedema, or bronchospams) and BLS unit only request an ALS unit as soon as possible.

	A	B	J	I	E
Perform initial assessment.	S	S	S	S	S
Secure airway and initiate O2 based on level of certification.	S	S	S	S	S
Establish IV/IO.			S	S	S
Apply and monitor ECG.				S	S
Administer Epinephrine 1:1,000 0.5mg IM. If BLS only contact Medical Control for the use of Epi-Pen Auto injector .		S	S	S	S
If patient is on Beta Blocker and is refractory to Epinephrine give Glucagon 1mg IV/IM.				S	S
If patient is experiencing bronchospasm administer Albuterol 2.5mg nebulized.		* O	S	S	S
Transport and contact Medical Control as soon as possible.		S	S	S	S
If life threatening systemic reaction is present after above treatment, and patient is in transport, administer Methylprednisolone (Solu-Medrol) 125mg IV/IO up to 25mg.				S	S

(*) Requires additional training and approval by agency OMD.

(O) Requires Online Medical Control order.

Medical-Altered Mental Status

There are many factors which may cause a change in mental status. Causes range from benign problems to potentially life-threatening cardiopulmonary or central nervous system disorders. Some of the more common causes of altered mental status are: head injury, seizures, hypoxia, acidosis, diabetes, overdose, metabolic abnormalities, meningitis, infections, ETOH, and psychological disturbances. Frequently, a diabetic patient may present with an altered mental status. This may be due to hypoglycemia or hyperglycemia; however, the patient often is unable to give any history and the physical assessment may be inconclusive. The prehospital goal is to maintain stable vital signs, protect the patient's airway and C-spine, and assess for possible causes. Get as complete a history as possible.

Treat any potentially reversible cause such as narcotic overdose or hypoglycemia.

	A	B	J	I	E
Assess scene for potential dangers. Perform patient assessment (A, B, C) and treat any immediate life threatening conditions. Consider potential for C-Spine injury and maintain C-Spine control.	S	S	S	S	S
Secure airway and initiate O2 based on level of certification.	S	S	S	S	S
Establish IV/IO.			S	S	S
Apply and monitor ECG.				S	S
Obtain blood glucose.		S	S	S	S
If patient is responsive and has gag reflex administer Oral Glucose .		O	S	S	S
If glucose reading is <60 and patient is unresponsive administer D50 25G IV/IO . If patient is PED administer D25 2-4ml/kg .			S	S	S
If unable to establish IV administer Glucagon 1mg IM .		*	S	S	S
If no response to Glucose/D50 administer Naloxone (Narcan) 0.4 to 2mg IV/IO/IM over 2 minutes. May be repeated to a maximum of 4 mg.			S	S	S
If unable to establish IV/IO Naloxone (Narcan) may be administered intranasal via Nasal Atomizer.		S	S	S	S
Transport and contact Medical Control as soon as possible.		S	S	S	S

(*) Requires additional training and approval by agency OMD.

(O) Requires Online Medical Control order.

Medical-Stroke/TIA

	A	B	J	I	E
Perform initial assessment.	S	S	S	S	S
Secure airway and initiate O2 based on level of certification.	S	S	S	S	S
Perform Cincinnati Stroke Scale evaluation and determine time of onset of symptoms.		S	S	S	S
Apply and monitor ECG.				S	S
Establish IV/IO.			S	S	S
Obtain blood glucose reading if reading is <60 administer D50 25g IV/IO.		*	S	S	S
Transport and contact Medical Control as soon as possible.		S	S	S	S

(*) Requires additional training and approval by agency OMD.

(O) Requires Online Medical Control order.

Cincinnati Pre-Hospital Stroke Scale

1. Rapid recognition, transport, and receiving emergency department that you have a potential stroke (CVA) patient enables the receiving facility to utilize the most effective diagnostic and treatment tools available and possible reduce or eliminate the devastation of a stroke, If a stroke is suspected, perform the CINCINNATI PRE-HOSPITAL STROKE SCALE evaluation.

2. The CINCINNATI PRE-HOSPITAL STROKE SCALE should not be used on the following:

- A. Patients that are victims of multiple trauma.
- B. Patients that have isolated minor injuries.
- C. Critically ill patients (systolic BP less than 80, intubated pts, etc.).

3. Have the patient perform the following three activities. Transport and notify the hospital immediately if the patient scores abnormal in any one activity:

A. Facial Droop (ask the patient to show teeth or smile)

Normal: (both sides move equally well)

Abnormal: (one side of the face doesn't move as well as the other)

B. Arm Drift (ask the patient to hold their arms straight forward and away from the body at 90 degrees to the torso):

Normal: (both arms move the same or both arms don't move at all)

Abnormal: (one arm doesn't move or one arm drifts down independent of the other)

C. Speech (ask the patient to say ("you can't teach an old dog new tricks")) :

Normal: (patient says correct words with no slurring noted)

Abnormal: (patient slurs words, says the wrong words, or can't speak)

NOTE: Exclusions on this checklist are not absolute. Final decisions regarding patient eligibility for any given intervention will be determined by the receiving physician(s).

Date: _____ Time: _____ EMS Unit: _____



PHOTOCOPY THIS FORM AND
LEAVE COPY WITH ED
PHYSICIAN OR NEUROLOGIST
AT BEDSIDE

Patient Name: _____ Age: _____

Estimated weight: _____ lbs/kg

1. Did patient awaken with symptoms? Yes / No
2. Time last known to be normal: _____
3. Time of symptom onset: _____
4. Onset witnessed or reported by: _____
5. Witness/Family or other individual able to legally provide consent for treatment coming to Emergency Department? _____ [ENCOURAGE TO DO SO].

If not, phone # where such individuals will be immediately available for calls from hospital staff to

() -

Cincinnati Stroke Scale Score:

Symptoms from **Cincinnati Stroke Scale** (circle abnormal findings)

ANY ONE FINDING = POSSIBLE STROKE=MINIMIZE ON SCENE TIME

FACIAL DROOP: R L
 ARM DRIFT: R L
 SPEECH: slurred wrong words mute /unable to speak

1 2 3

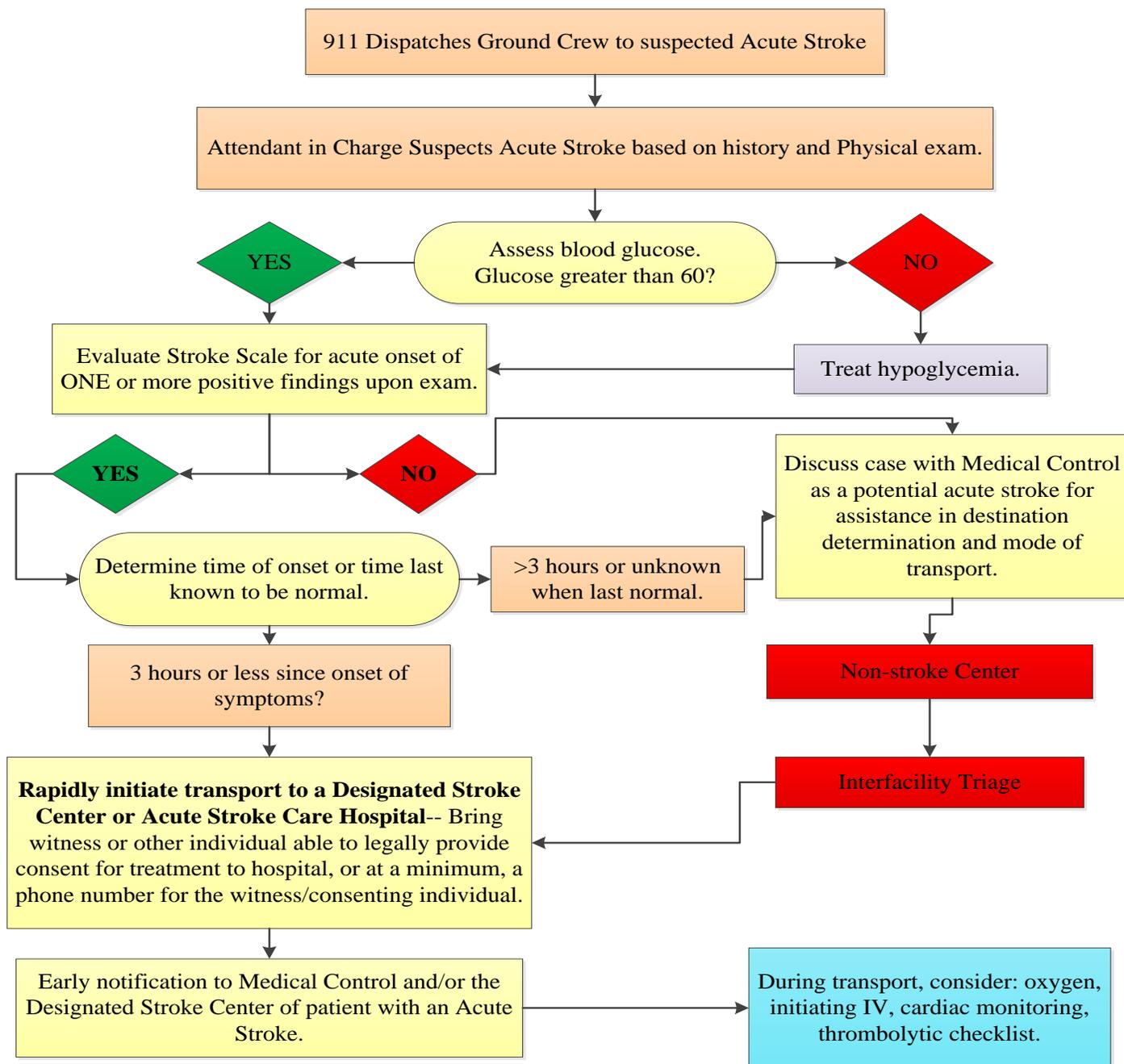
Indicate status for each

Current use of anticoagulants (e.g., warfarin sodium/Coumadin)	Yes	No	?
Has blood pressure consistently over 185/110 mm Hg	Yes	No	?
Witnessed seizure at symptom onset	Yes	No	?
intracranial hemorrhage history	Yes	No	?
GI or GU bleeding history within 3 weeks	Yes	No	?
This event within 3 months of prior stroke	Yes	No	?
This event within 3 months of serious head trauma	Yes	No	?
This event within 21 days of acute myocardial infarction	Yes	No	?
This event within 21 days of lumbar puncture (spinal tap)	Yes	No	?
This event within 14 days of major surgery or serious trauma	Yes	No	?
Is pregnant	Yes	No	?
Abnormal blood glucose level (<50). FSBS if done:			

Receiving Site/Physician Printed Name: _____ Time _____

EMS Provider Name: _____ Signature _____

Field Stroke Triage Decision Scheme



If time from symptom onset is more than 3 hours, discuss case with Medical Control as a potential acute stroke for destination determination. Recall that patients with specific acute stroke types may benefit from intercession up to 24 hours, although the sooner an acute stroke is treated, the better the potential outcome. Based on patient time of onset and discussion with Medical Control, consider whether use of helicopter EMS will offer potential benefit to the patient, either in time to Designated Stroke Center, or for critical care management expertise. EMS does not determine whether a patient is excluded from any or all therapeutic options. Final decisions regarding patient eligibility for any given intervention will be determined by the receiving physician(s).

Medical-Diabetic-Hyperglycemia

	A	B	J	I	E
Perform initial assessment.	S	S	S	S	S
Secure airway and initiate O2 based on level of certification.	S	S	S	S	S
Obtain blood glucose reading.		S	S	S	S
Establish IV/IO.			S	S	S
Apply and monitor ECG.				S	S
Transport and contact Medical Control as soon as possible.		S	S	S	S

Medical-Diabetic-Hypoglycemia

	A	B	J	I	E
Perform initial assessment.	S	S	S	S	S
Secure airway and initiate O2 based on level of certification.	S	S	S	S	S
Establish IV/IO.			S	S	S
Obtain blood glucose reading.		S	S	S	S
If blood glucose is <60 and patient is awake and alert with gag reflex administer Oral Glucose.		S	S	S	S
If glucose reading is <60 and patient is unresponsive administer D50 25G IV/IO. If patient is PED administer D25 2-4ml/kg.			S	S	S
If unable to establish IV administer Glucagon 1mg IM.		* O	S	S	S
Apply and monitor ECG.				S	S
Transport and contact Medical Control as soon as possible.		S	S	S	S

(*) Requires additional training and approval by agency OMD.

(O) Requires Online Medical Control order.

**Medical-Respiratory Distress/
Asthma/COPD/Croup/Reactive Airway**

	A	B	J	I	E
Perform initial assessment.	S	S	S	S	S
Secure airway and initiate O2 based on level of certification.	S	S	S	S	S
Establish IV/IO.			S	S	S
Apply and monitor ECG.				S	S
If wheezing administer Albuterol 2.5mg nebulized if wheezing continues Albuterol 2.5mg nebulized may be repeated after 15 minutes.		*	S	S	S
Transport and contact Medical Control as soon as possible.		S	S	S	S
If wheezing continues after second Albuterol treatment consider Methylprednisolone (Solu-Medrol) 125mg IV/IO if pediatric patient 1mg/kg.				S	S

(*) Requires additional training and approval by agency OMD.

(O) Requires Online Medical Control order.

Environmental-Heat Exposure/Exhaustion

	A	B	J	I	E
Perform initial assessment.	S	S	S	S	S
Remove patient from heat to a cooler environment, do not allow patient to chill.	S	S	S	S	S
Secure airway and initiate O2 based on level of certification.	S	S	S	S	S
If patient is fully conscious, allow patient to drink fluids (if patient is not nauseated).	S	S	S	S	S
Establish IV and administer 250-300cc of Normal Saline per hour.			S	S	S
Apply and monitor ECG.				S	S
Transport and contact Medical Control as soon as possible.		S	S	S	S

Environmental-Cold Exposure

If patient is in Cardiac Arrest ALS interventions may be ineffective without rewarming the patient. One round of ALS treatment until patient has been rewarmed.

	A	B	J	I	E
Perform initial assessment.	S	S	S	S	S
Move patient to warm area. (Avoid excessive handling)	S	S	S	S	S
Remove any wet clothing and begin external rewarming.	S	S	S	S	S
Establish IV/IO with warm IV fluids.			S	S	S
Apply and monitor ECG.				S	S
Transport and contact Medical Control as soon as possible.		S	S	S	S
If patient is in full arrest refer to Cardiac section of protocols, us first round ACLS interventions only.		S	S	S	S

(*) Requires additional training and approval by agency OMD.

(O) Requires Online Medical Control order.

Medical-Hypertension

There are a number of caused of Hypertensive Crisis. In the patient who has a diastolic blood pressure >120mm hg, and who is symptomatic: (dizziness, headache, neurological deficits, chest pain, or dyspnea) must be treat for Hypertension.

	A	B	J	I	E
Perform initial assessment.	S	S	S	S	S
Secure airway and initiate O2 based on level of certification.	S	S	S	S	S
Establish IV/IO.			S	S	S
Apply and monitor ECG.				S	S
Administer Nitro 0.4mg sublingual tablet or spray.			O	S	S
Transport and contact Medical Control as soon as possible.		S	S	S	S
Additional Nitro 0.4mg sublingual may be given if diastolic blood pressure >110mm hg every 5 minutes max of 3 doses.			O	S	S
If diastolic blood pressure becomes <110 apply Nitro Paste 2" .				O	S

(*) Requires additional training and approval by agency OMD.

(O) Requires Online Medical Control order.

Medical-Hypotension/Shock (Non-trauma)

There are many causes of hypotension. This protocol offers a way to attempt to deal with the many causes of hypotension when the specific cause is unknown. It is always best to know the specific reason for hypotension, but in the field this knowledge may be difficult to obtain. Ultimately the causes of hypotension will be: Volume loss, ineffective pumping action of the heart, loss of control over blood vessel size, or a mixture of these reasons.

Hypotension shall be considered as a systolic BP of <80mm Hg, or <100mm Hg in the presence of other symptoms of shock (diaphoresis, nausea, decreased level of consciousness, weak and thready pulse, delayed capillary refill).

	A	B	J	I	E
Perform initial assessment.	S	S	S	S	S
Secure airway and initiate O2 based on level of certification.	S	S	S	S	S
Establish IV/IO.			S	S	S
Apply and monitor ECG.				S	S
If breath sounds are clear and there is no reason to not give a rapid fluid bolus give 300-500cc fluid bolus and reassess patient.			S	S	S
Transport and contact Medical Control as soon as possible.		S	S	S	S
If hypotension persists an additional fluid bolus may be given as long as lung sounds are clear.			O	O	S
If hypotension persists after fluid boluses Dopamine may be administered 5mcg/kg/min. Titrated to a Systolic pressure of 100mm Hg. (ONLY IF HYPOTENSION IS NOT DUE TO HYPOVILEMA.)				O	O

(*) Requires additional training and approval by agency OMD.

(O) Requires Online Medical Control order.

Medical-Nausea/Vomiting

	A	B	J	I	E
Perform initial assessment.	S	S	S	S	S
Secure airway and initiate O2 based on level of certification.	S	S	S	S	S
Establish IV/IO.			S	S	S
Apply and monitor ECG.				S	S
If patient has prolonged vomiting, active vomiting or nausea causing sever discomfort administer Promethazine (Phenergan) 12.5mg IV or Ondansetron (Zofran) 0.1mg/kg up to 4mg IV over 2 to 5 min.				S	S
If nausea/vomiting persists after 15 min a 2 nd dose of Promethazine (Phenergan) 12.5mg IV may be administered.				S	S
If patient presents with evidence of dehydration/hypotension administer bolus of Normal Saline 250ml/hr.			S	S	S
Transport and contact Medical Control as soon as possible.		S	S	S	S

(*) Requires additional training and approval by agency OMD.

(O) Requires Online Medical Control order.

Medical-Overdose/Poisoning/Toxic Ingestion

	A	B	J	I	E
Perform initial assessment.	S	S	S	S	S
Secure airway and initiate O2 based on level of certification.	S	S	S	S	S
Establish IV/IO.			S	S	S
Apply and monitor ECG.				S	S
If Pt is unconscious and/or has a depressed respiratory rate consider narcotic/opiate overdose. If narcotic overdose administer Naloxone (Narcan) 0.4 mg IV/IO/IM over 2 minutes, dose may be repeated up to a maximum of 2mg.			O	S	S
If unable to establish IV/IO Naloxone (Narcan) may be administered intranasal via Nasal Atomizer.		S	S	S	S
If S.L.U.D.G.E. (salivation, lacrimation, urination, defecation, GI complaints, emesis) symptoms, meiosis (small pupils) bradycardia, hypotension, altered LOC are found suspect organophosphate poisoning/nerve agent. Administer Atropine 2 mg IV/IO every 5 minutes until symptoms improve.				O	O
If decreased mental status/seizures, cardiac arrhythmia (especially wide complex) and/or hypotension are found suspect Tricyclic Antidepressant or Cocaine overdose. Administer Sodium Bicarbonate 50 mEq IV/IO.				O	O
If calcium channel blocker or beta blocker overdose suspected administer Glucagon 1mg IV/IO.			O	O	O
Transport and contact Medical Control as soon as possible.		S	S	S	S

(*) Requires additional training and approval by agency OMD.

(O) Requires Online Medical Control order.

Medical-Seizures

	A	B	J	I	E
Perform initial assessment.	S	S	S	S	S
Secure airway and initiate O2 based on level of certification.	S	S	S	S	S
Protect C -spine. Place Patient on their side, prep suction for use if patient is vomiting.	S	S	S	S	S
Establish IV/IO.			S	S	S
Apply and monitor ECG.				S	S
Obtain blood glucose.		*	S	S	S
If glucose reading is <60 and patient is unresponsive administer D50 25G IV/IO. If patient is PED administer D25 2-4ml/kg.			S	S	S
If unable to establish IV administer Glucagon 1mg IM.		*	S	S	S
Administer Diazepam (Valium) 2 to 10 mg IV/IO. Repeat every 2 minutes if patient is still in active seizure until seizure stops or maximum of 20mg. Pediatric dose: 0.5 mg/kg pararectally if unable to start IV or 0.25mg/kg IV.				S	S
Transport and contact Medical Control as soon as possible.		S	S	S	S

(*) Requires additional training and approval by agency OMD.

(O) Requires Online Medical Control order.

TRAUMA

RELATED EMERGENCIES

Injury-Burns-Thermal

MINOR BURNS-partial thickness: <10% BSA for adult, <5% BSA for child or elderly patient; full thickness: <2% BSA.

MODERATE BURNS-partial thickness: 10 to 20% BSA for adult, 5-10% for child or elderly patient; full thickness: 2-5% BSA; suspected inhalation injury or circumferential burns.

MAJOR BURNS-partial thickness: >20% BSA for adult, >10% BSA for child or elderly patient; full thickness >5% BSA; any significant burn to face, eyes, ears, genitals, joints, or significant associated injuries.

Minor Burn

	A	B	J	I	E
Remove the patient to a safe environment, assuring individual safety. Stop the burning process with available resources.	S	S	S	S	S
Perform initial assessment.	S	S	S	S	S
Secure airway and initiate O2 based on level of certification.	S	S	S	S	S
Establish IV/IO.			S	S	S
Apply and monitor ECG.				S	S
Remove material from around the burned areas which are not adhering to the wound.	S	S	S	S	S
Remove or loosen constricting items (rings, belts, collars, watches, etc.).	S	S	S	S	S
Cool burn with cold water if skin surface is intact. DO NOT immerse in ice or icy water.	S	S	S	S	S
Transport and contact Medical Control as soon as possible.	S	S	S	S	S

Major Burn

	A	B	J	I	E
Remove the patient to a safe environment, assuring individual safety. Protect patient from Hypothermia. Stop the burning process with available resources.	S	S	S	S	S
Cover burned areas with DRY burn sheet or clean sheet.	S	S	S	S	S
Perform initial assessment.	S	S	S	S	S
Secure airway and initiate O2 based on level of certification.	S	S	S	S	S
Assess burn area using Rule of Nines to determine Total Body Surface Area burned.	S	S	S	S	S
Establish IV/IO. (16g or larger)			S	S	S
Apply and monitor ECG.				S	S
Administer Morphine Sulfate 2-10 mg IV in 2mg increments for pain as needed.				O	S
Begin fluid resuscitation (Parkland Formula).			*	S	S
Transport and contact Medical Control as soon as possible.		S	S	S	S

Parkland Formula:

4ml X Patient weight in KG X BSA = Total amount of fluid.

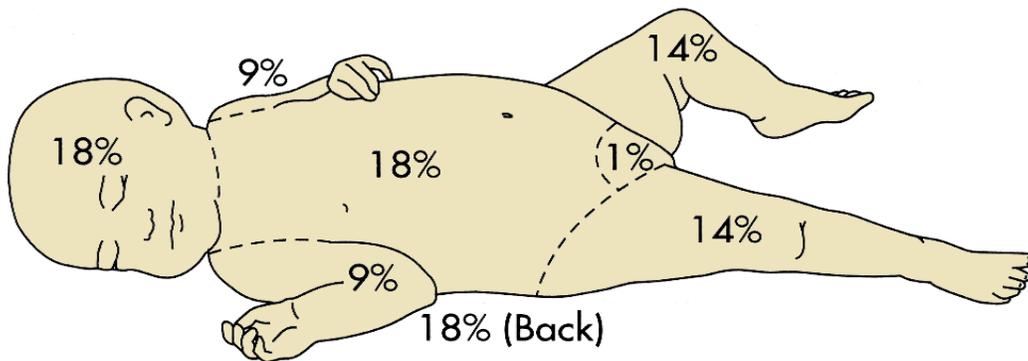
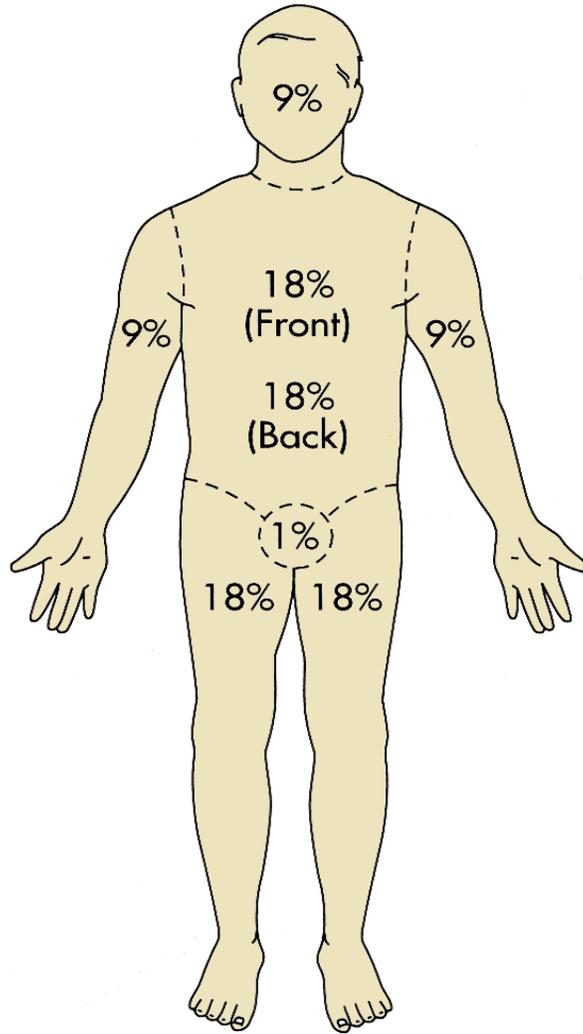
Total amount of fluid / 2.

1st half should be administered over the first 8 hrs, with the 2nd half administered over the next 16 hours.

(*) Requires additional training and approval by agency OMD.

(O) Requires Online Medical Control order.

Rule of Nines



Injury-Multisystem

	A	B	J	I	E
Secure Scene (Assess scene for personal, personnel, and patient safety.)	S	S	S	S	S
Control Cervical Spine.	S	S	S	S	S
Perform initial assessment.	S	S	S	S	S
Secure airway and initiate O2 based on level of certification.	S	S	S	S	S
If signs of Tension Pneumothorax exist, decompress the chest via larger bore needle in the 2 nd intercostal space, midclavicular line.				S	S
Control severe bleeding.	S	S	S	S	S
Transport and contact Medical Control as soon as possible. Transport in accordance with Regional Trauma Triage Plan.		S	S	S	S
If patient meets Air Medical Transport Trauma Guidelines request Closest Appropriate Aircraft. (DO NOT DELAY TRANSPORT WAITING ON AIRCRAFT)	S	S	S	S	S
Place patient on Long Spine Board and apply CID. Extremity injuries may be splinted during transport. (DO NOT DELAY TRANSPORT TO SPLINT EXTREMITY INJURIES.)	S	S	S	S	S
Establish IV/IO. IV X2 large bore (DO NOT DELAY TRANSPORT.) If patient entrapment IV's should be established during extrication.			S	S	S
Apply and monitor ECG.				S	S

(*) Requires additional training and approval by agency OMD.

(O) Requires Online Medical Control order.

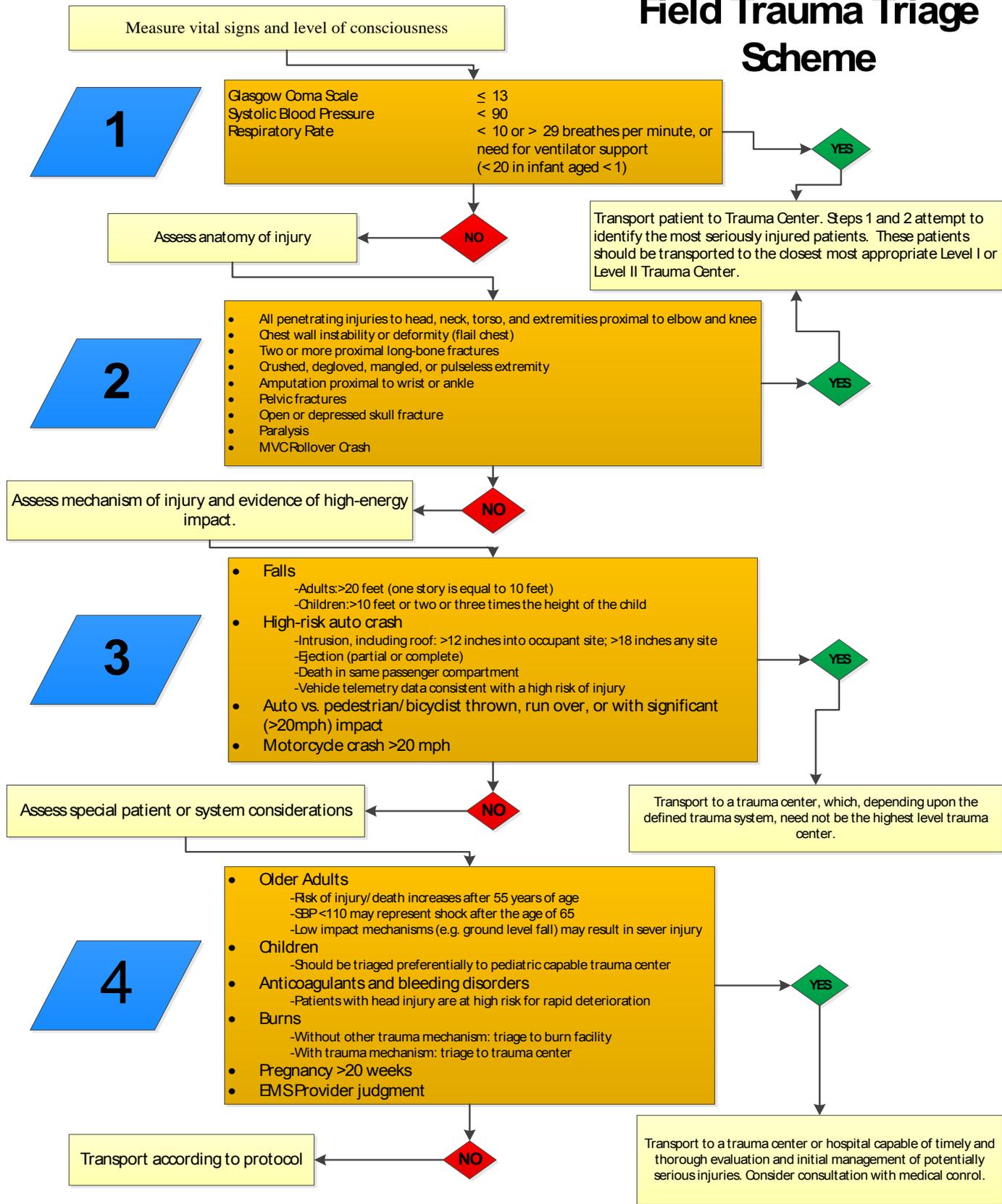
Injury-Spinal Cord

	A	B	J	I	E
Secure Scene (Assess scene for personal, personnel, and patient safety.)	S	S	S	S	S
Control Cervical Spine.	S	S	S	S	S
Perform initial assessment.	S	S	S	S	S
Secure airway and initiate O2 based on level of certification.	S	S	S	S	S
Establish IV/IO. IV X2 large bore (DO NOT DELAY TRANSPORT.)			S	S	S
Perform Pt Assessment looking for Neurological deficits. If Neurological deficits are found and injury is less than 8 hours old administer Solu-Medrol 30 mg/kg slow IV push over 5-10 min.				O	O
If ground transport time is greater than air transport time to the closest Trauma Center request Air Medical Transport request Closest Appropriate Aircraft. (DO NOT DELAY TRANSPORT WAITING ON AIRCRAFT)	S	S	S	S	S
Transport and contact Medical Control as soon as possible. Transport in accordance with Regional Trauma Triage Plan.		S	S	S	S

(*) Requires additional training and approval by agency OMD.

(O) Requires Online Medical Control order.

Field Trauma Triage Scheme



REVISED TRAUMA SCORE (RTS)

The trauma score is a numerical grading system for estimating the severity of injury. Any patient with a score 11 or less should be considered a potential priority 1 trauma and directed to a Level 1 Trauma Center.

		SCORE
SYSTOLIC BLOOD PRESSURE	>89	4
	75-89	3
	50-74	2
	1-49	1
	0	0
RESPIRATORY RATE	10-29	4
	>29	3
	6-9	2
	1-5	1
	0	0
GLASGOW COMA SCALE	13-15	4
	9-12	3
	6-8	2
	4-5	1
	3	0
TOTAL		0-12

PEDIATRIC TRAUMA SCORE**A. Weight**

- | | |
|--------------------|----|
| 1. Weight >20kg: | +2 |
| 2. Weight 10-20kg: | +1 |
| 3. Weight <10kg: | -1 |

B. Airway

- | | |
|-----------------------|----|
| 1. Normal Airway: | +2 |
| 2. Maintained Airway: | +1 |
| 3. Invasive Airway: | -1 |

C. Systolic Blood Pressure

- | | |
|--------------------|----|
| 1. SBP >90 mmHg: | +2 |
| 2. SBP 50-90 mmHg: | +1 |
| 3. SBP <50 mmHg: | -1 |

D. Central Nervous System

- | | |
|--------------|----|
| 1. Awake: | +2 |
| 2. Obtunded: | +1 |
| 3. Coma: | -1 |

E. Open Wound

- | | |
|----------------------|----|
| 1. No Open Wound: | +2 |
| 2. Minor Open Wound: | +1 |
| 3. Major Open Wound: | -1 |

F. Skeletal Trauma

- | | |
|---|----|
| 1. No Skeletal Trauma: | +2 |
| 2. Closed Fracture: | +1 |
| 3. Open Fracture or Multiple Fractures: | -1 |

GLASGOW COMA SCALE

EYE OPENING	Spontaneous	4
	To Voice	3
	To Pain	2
	None	1
VERBAL RESPONSE	Oriented	5
	Confused	4
	Inappropriate Words	3
	Incomprehensible Words	2
	None	1
MOTOR RESPONSE	Obeys Command	6
	Localizes Pain	5
	Withdraw (pain)	4
	Flexion (pain)	3
	Extension (pain)	2
	None	1
TOTAL		3-15

Medication

Pediatric Medications

Early establishment of medical control is imperative especially with the pediatric patient. Their causes of cardiac arrest are much different than adult patients. Any on-line orders should be followed, as the doses below only serve as guidelines. Refer to AHA PALS 2006 provider manual for medication reference.

ALBUTEROL: .15 mg/kg by nebulizer.

ATROPINE: 0.02 mg/kg. Absolute minimum dose is 0.1mg. Maximum single dose is 0.5 milligrams in the child, 1.0 milligrams in the adolescent. Maximum total dose is 1 milligram for a child, 2 milligrams in an adolescent.

DEXTROSE 50% (D50): 0.5 to 1.0 gram/kg slowly. In children this should be diluted 1:1 with Sterile Water creating D25 and give slowly. 1 Amp=25 grams.

DIAZEPAM (VALIUM): 0.25 mg/kg IV very slowly. Careful evaluation of respiration and airway mandatory.

ADENOCARD (ADENOSINE): 0.1 mg/kg second dose of 0.2 mg/kg third dose of 0.2mg/kg.

EPINEPHRINE (1:10,000 conc.): 0.01 mg/kg of 1:10,000 for first IV/IO dose, then .1 mg/kg of 1:1,000 every 5 minutes for subsequent dose.

FUROSEMIDE (LASIX): 1mg/kg IV slowly.

LIDOCAINE: 1mg/kg, maximum dose 3mg/kg.

MORPHINE: 0.1 - 0.2mg/kg slowly.

NALOXALONE (NARCAN): 0.1mg/kg IV titrated to effect.

SODIUM BICARBONATE: 1meq/kg IV only after aggressive hyperventilation through a patent airway.

DEFIBRILLATION: 2J/kg > 4J/kg > 4J/kg

SYNCRONIZED CARDIOVERSION: 1J/Kg > 2J/Kg > 2J/Kg

Adult Medications

ADENOCARD (Adenosine):

THERAPEUTIC EFFECTS

Antiarhythmic. Slows conduction time through the AV node and can interrupt the re-entry pathways through AV node.

INDICATIONS

Paroxysmal supraventricular tachycardia (PSVT).

CONTRAINDICATIONS

- 1). 2nd degree type II or 3rd degree
- 2). Sick sinus rhythm

SIDE EFFECTS

- 1). Transient dysrhythmias
- 2). Facial flushing
- 3). Dyspnea
- 4). Chest pressure
- 5). Hypotension
- 6). Headache
- 7). Nausea
- 8). Bronchospasm

HOW SUPPLIED

6mg in 2ml flip-top vials.

ADMINISTRATION AND DOSAGE

Give 6mg IV push - rapidly over 1 - 2 seconds. **Via antecubital access.** Repeat dose: If no effect after 2 minutes, give 12mg rapidly over 1 - 2seconds.

NOTE: Adenocard is blocked by Caffeine and Theophylline and is potentiated by Dipyrdamole (Persantine) and Tegratol. Consider reducing dose when pts are on potentiating medications.

ALBUTEROL - BRONCHODILATOR
AEROSOL (Ventolin, Proventil)

CLINICAL PHARMACOLOGY

Albuterol relaxes smooth muscle of the bronchi and uterus and the vascular supply to skeletal muscle, but may have less cardiac stimulant effects than isoproterenol.

INDICATIONS

Albuterol is indicated for the relief of bronchospasm in patients with reversible obstructive airway disease and for the prevention of exercise-induced bronchospasm.

CONTRAINDICATIONS

Contraindicated in patients with a history of hypersensitivity to any of its components. This medication should not be used concomitantly with epinephrine or other sympathomimetic aerosol bronchodilators.

SIDE EFFECTS

The potential for paradoxical bronchospasm should be kept in mind. If it occurs, the preparation should be discontinued immediately and alternative therapy instituted.

ADMINISTRATION AND DOSAGE

Unit dose is 2.5mg in 3 cc's of NS. Place Albuterol in Nebulizer and connect to O2 flowmeter. Set flowmeter at 10 L/min. and place mask or mouthpiece on patient. Instruct patient to take slow, deep breaths with an inspiratory hold. Monitor if available equipment and staff.

**Place patient on cardiac monitor if available.

Amiodrone

THERAPEUTIC EFFECTS

Anti-dysrhythmic which prolongs the duration of the action potential and effective refractory period.

INDICATIONS

Initial treatment and prophylaxis of frequently recurring VF and hemodynamically unstable VT in patients' refractory to other therapy.

CONTRAINDICATIONS

- 1.) Pulmonary congestion.
- 2.) Cardiogenic shock.
- 3.) Hypotension
- 4.) Sensitivity to amiodarone

SIDE EFFECTS

- 1.) Hypotension
- 2.) Headache
- 3.) Dizziness
- 4.) Bradycardia
- 5.) AV conduction abnormalities
- 6.) Flushing
- 7.) Abnormal salivation

HOW SUPPLIED

150 MG/ML Vials

DOSAGE AND ADMINISTRATION

Adult: Loading dose for cardiac arrest: 300 mg IV push; flush with 10 ML D5W or NS.
Supplemental bolus dose for cardiac arrest: 150 MG IV push; flush with 10 ML of D5W or NS.
Loading infusion after reestablishment of spontaneous circulation: 360 MG (diluted) over 6 hours. Maintenance infusion: 540 MG (diluted) over 18 hours. For profussing rythums give 150 mg over 10 min IV.

Pediatric: Safety has not been established.

Atropine Sulfate

THERAPEUTIC EFFECTS

By blocking parasympathetic (vagal) action on the heart, atropine enhances conduction through the AV junction and accelerates the heart rate, thereby improving cardiac output. In addition, by speeding up a slow heart to a normal rate, atropine reduces the chances of ectopic activity in the ventricles and thus of Ventricular Fibrillation. Atropine is most effective in reversing bradycardia due to increased parasympathetic tone or to morphine; it is less effective in treating bradycardia due to actual damage to the AV or SA node.

INDICATIONS

- 1). SYMPTOMATIC BRADYCARDIA
- 2). As an antidote in ORGANOPHOSPHATE POISONING.

CONTRAINDICATIONS

- 1). Atrial flutter or atrial fibrillation where there is a rapid ventricular response.
- 2). Glaucoma.
- 3). Use with extreme caution in myocardial infarction.

SIDE EFFECTS

The patient should be warned that he or she may experience some of the following side effects and that these side effects are part of the drug's usual and expected actions:

- 1). Blurred vision, headache, pupillary dilatation.
- 2). Dry mouth, thirst.
- 3). Flushing of the skin.
- 4). Difficulty in urinating (especially older men).

HOW SUPPLIED

Prefilled syringes containing 1mg in 10ml.

ADMINISTRATION AND DOSAGE

In the field, atropine is usually given intravenously for bradycardia; for organophosphate poisoning, a combination of intravenous and intramuscular administration is commonly used. In resuscitation from cardiac arrest, if an intravenous route cannot be established, atropine may be given through the endotracheal tube.

- 1). For bradycardia: 0.5mg IV, repeat at 5 - minute intervals until the desired heart rate is achieved; the total dose should not, however, exceed .04 mg/kg. Doses smaller than 0.5 mg, or a dose given too slowly, may slow rather than speed up the heart rate. Excessive doses may precipitate ventricular tachycardia or fibrillation.
- 2). For organophosphate poisoning: 2mg IM and 1mg IV. The IV dose may be repeated every 5 to 10 minutes as needed until a decrease in secretions is observed.

Diphenhydramine (Benadryl)

Therapeutic Effect

Antihistamine

Indications

Allergic reaction, extra pyramidal symptoms, such as caused by Phenergan.

Contraindications

Asthma, pregnant and lactating females.

Side Effects

Sedation, blurred vision, anticholinergic effects.

How supplied

2 ml vial (50 mg/ml.)

Dose

25-50 mg IV or deep IM

50% Dextrose (D50)

THERAPEUTIC EFFECTS

Restores circulating blood sugar level to normal in states of hypoglycemia.

Acts transiently as an osmotic diuretic.

INDICATIONS

- 1). To treat coma caused by HYPOGLYCEMIA.
- 2). To treat COMA OF UNKNOWN CAUSE.
- 3). To treat STATUS EPILEPTICUS OF UNCERTAIN CAUSE.
- 4). Some cases of REFRACTORY CARDIAC ARREST.

CONTRAINDICATIONS

Intracranial hemorrhage.

Acute CUA

SIDE EFFECTS

- 1). May precipitate severe neurologic symptoms in alcoholics. For this reason, when given to a known alcoholic, should be accompanied by thiamine, 100mg IM, which will prevent this neurologic syndrome.
- 2). Will cause tissue necrosis if it infiltrates; should therefore be given only through a good, rapidly flowing IV line.

HOW SUPPLIED

Prefilled syringes and vials containing 50ml of 50% dextrose (=25grams of dextrose).

ADMINISTRATION AND DOSAGE

Given intravenously, through a free-flowing intravenous line, preferably in a large vein. If possible, draw blood for serum glucose determinations before administering the dextrose.

Dose

50ml of 50% dextrose (25gm) as a bolus IV.

Diazepam (Valium)

THERAPEUTIC EFFECTS

Through its depressant action on the central nervous system, can terminate some seizures. Also has a calming effect in anxiety.

INDICATIONS

- 1). To treat STATUS EPILEPTICUS.
- 2). Given as a sedative prior to CARDIOVERSION in conscious patients.
- 3.) Facilitation of Intubation

RELATIVE CONTRAINDICATIONS

- 1). Should not be given during pregnancy because of possible toxic effects on the fetus.
- 2). Should not be given to patients who have taken alcohol or other sedative drugs.
- 3). Should not be given to patients with hypotension.

SIDE EFFECTS

- 1). Possible hypotension.
- 2). Confusion, stupor.
- 3). In some patients, especially the elderly, the very ill, and those with pulmonary disease, may cause respiratory arrest and/or cardiac arrest.

HOW SUPPLIED

In prefilled syringes and ampules of 2ml and in vials of 10ml, in a concentration of 5mg/ml.

ADMINISTRATION AND DOSAGE

For status epilepticus: given intravenously in slow, titrated doses. Before administering the drug, check and record the patient's vital signs. Then give 2.5mg (0.5ml) SLOWLY IV. Wait a few minutes and recheck the BP; if it has fallen, do not give any more of the drug. If the BP is stable, and the desired therapeutic effect has not been achieved, give another 2.5mg (0.5ml) IV. Then recheck the BP. Continue until the seizures have stopped or the BP drops, but do not exceed a total dose of 10 mg in the field.

Dopamine

Dopamine is only to be administered with DIAL-A-FLOW or IV PUMP!

THERAPEUTIC EFFECTS

Beta sympathetic drug - hence causes an increase in the force and rate of cardiac contractions as well as dilatation of renal and mesenteric arteries. This latter effect promotes urine flow, and for this reason, dopamine is sometimes preferred over norepinephrine (which constricts renal arteries) in shock. Dopamine causes less increase in oxygen consumption by the myocardium than does isoproterenol. At low doses, the beta effects of dopamine predominate; at high doses, dopamine has alpha effects as well and thus will cause vasoconstriction.

INDICATIONS

To increase cardiac output in CARDIOGENIC SHOCK while maintaining good renal perfusion.
Symptomatic Bradycardia.

CONTRAINDICATIONS

- 1). Should not be used as first - line therapy in hypotension caused by hypovolemia (e.g., hemorrhagic shock), where volume replacement should precede the use of vasopressors.
- 2). Pheochromocytoma (a tumor that produces epinephrine and/or related substances).
- 3). Should not be given in the presence of uncorrected tachyarrhythmias or ventricular fibrillation.

SIDE EFFECTS

- 1). Ectopic beats, palpitations, tachycardia.
- 2). Nausea, vomiting
- 3). Dyspnea, angina
- 4). Headache

HOW SUPPLIED

10 ml prefilled additive syringe containing 400mg (40mg/ml)

ADMINISTRATION AND DOSAGE

Given by titrated intravenous infusion (microdrip infusion set).

Dosage

Inject contents of prefilled syringe (400mg) into 500ml bag of D5W to yield a concentration of 800mcg/ml. Start the infusion at a rate of 5mcg/kg/min. (e.g., 140-320mcg/min. for a 70-kg man, or roughly 0.25ml/min. of above dilution). Titrate the infusion according to the state of consciousness, blood pressure, and urine flow. Not to exceed 20mcg/kg/min.

Dopamine Drip Chart

Dopamine 200 mg/250ml						Dopamine 400 mg/250ml					
<u>Mcg/kg/min</u>						<u>Mcg/kg/min</u>					
KG	1	2	3	4	5	KG	1	2	3	4	5
40	3	6	9	12	15	40	1.5	3	4.5	6	7.5
45	3.4	6.8	10.2	13.6	16.8	45	1.7	3.4	5.1	6.8	8.4
50	3.8	7.6	11.2	15	18.8	50	1.9	3.8	5.6	7.5	9.4
55	4.2	8.2	12.4	16.6	20.6	55	2.1	4.1	6.2	8.3	10.3
60	4.6	9	13.6	18	22.6	60	2.3	4.5	6.8	9	11.3
65	4.8	9.8	14.6	19.6	24.2	65	2.4	4.9	7.3	9.8	12.2
70	5.2	10.6	15.8	21	26.2	70	2.6	5.3	7.9	10.5	13.1
75	5.6	11.2	16.8	22.6	28.2	75	2.8	5.6	8.4	11.3	14.1
80	6	12	18	24	30	80	3	6	9	12	15
85	6.4	12.8	19.2	25.6	31.8	85	3.2	6.4	9.6	12.8	15.9
90	6.8	13.6	20.2	27	33.8	90	3.4	6.8	10.1	13.5	16.9
95	7.2	14.2	21.4	28.6	35.6	95	3.6	7.1	10.7	14.3	17.8
100	7.6	15	22.6	30	37.6	100	3.8	7.5	11.3	15	18.8
105	7.8	15.8	23.6	31.6	39.4	105	3.9	7.9	11.8	15.8	19.7
110	8.2	16.6	24.8	33	41.2	110	4.1	8.3	12.4	16.5	20.6

Epinephrine

THERAPEUTIC EFFECTS

- 1). In cardiac arrest, may restore electric activity in asystole; increases myocardial contractility; and decreases the threshold for defibrillation - all through its actions as a beta sympathetic agent. In addition, the alpha effects of epinephrine, causing vasoconstriction, elevate the perfusion pressure and may thus improve coronary blood flow during external cardiac compressions.
- 2). In anaphylaxis, acts as a bronchodilator (beta effect) and helps maintain blood pressure (alpha effect).

INDICATIONS

- 1). In CARDIAC ARREST, to restore electric activity in asystole or to enhance defibrillation potential in ventricular fibrillation; also to elevate systemic vascular resistance and thereby improve perfusion pressure during resuscitation.
- 2). To treat the life-threatening symptoms of ANAPHYLAXIS.
- 3). To treat acute attacks of ASTHMA.

CONTRAINDICATIONS

- 1). Must be used with caution in patients with angina, hypertension, or hyperthyroidism.
- 2). THERE ARE NO CONTRAINDICATIONS TO THE USE OF EPINEPHRINE IN THE SITUATION OF CARDIAC ARREST OR ANAPHYLACTIC SHOCK.

SIDE EFFECTS

In a conscious patient, may cause palpitations, from tachycardia or ectopic beats, and elevations of blood pressure (which may not be desirable if the patient is already hypertensive). The asthmatic with preexisting heart disease may experience dysrhythmias if treated with epinephrine.

HOW SUPPLIED

- 1). Prefilled syringes containing 1mg of epinephrine in 10ml (1:10,000 solution).
- 2). Prefilled Tubex syringe containing 1mg epinephrine in 1ml (1:1,000 solution).

ADMINISTRATION AND DOSAGE

- 1). In cardiac arrest, epinephrine is given intravenously. Dosage: 1 mg IV. (1:10,000 solution); repeat at 3-minute intervals throughout resuscitation, (higher dose EPI is option of Med. Control.)
- 2). For anaphylactic reactions: Moderate to severe reactions, with shock: 0.3 to 0.5mg (5ml of a 1:10,000 solution) is given slowly IV.
- 3). For severe asthmatic attacks: Consider given SQ in a dose of 0.3 to 0.5ml of a 1:1,000 solution.

Furosemide (Lasix)

THERAPEUTIC EFFECTS

Potent diarrhetic, causing the excretion of large volumes of urine within 5 to 30 minutes of administration, thus useful in ridding the body of excess fluid in conditions such as congestive heart failure (CHF). Not used often in the field when the distance to the hospital is short. However, furosemide may be useful in long-range transports of patients in marked heart failure (especially catheterized patients) where there is a need to begin definitive therapy before the patient arrives at the hospital.

INDICATIONS

To reverse fluid overload associated with CONGESTIVE HEART FAILURE and PULMONARY EDEMA.

CONTRAINDICATIONS

- 1). Should not be given to pregnant women.
- 2). Should not be given to patients with hypokalemia (low potassium).
Hypokalemia may be suspected in a patient who has been on chronic diuretic therapy or whose ECG shows prominent P waves, diminished T waves, and the presence of U waves.

SIDE EFFECTS

Immediate side effects may include nausea and vomiting, potassium depletion (with attendant cardiac dysrhythmias), and dehydration.

ADMINISTRATION AND DOSAGE

In the field, furosemide is given intravenously. If at all possible, the patient should have a urinary catheter in place.

Dosage

40mg SLOWLY IV (injected over 1 - 2 min.). If a response is not obtained, a second dose of 40 to 80mg may be given, but only at the discretion of Med. Control.

GLUCAGON

THERAPEUTIC EFFECTS

Glucagon causes an increase in blood glucose concentration and is used in the treatment of hypoglycemic states. Glucagon acts only on liver glycogen, converting it to glucose. Parenteral administration of glucagon produces relaxation of the smooth muscle of the stomach, duodenum, small bowel, and colon.

INDICATIONS

Glucagon is useful in counteracting severe hypoglycemic reactions in diabetic patients or during insulin shock therapy in psychiatric patients. Glucagon is helpful in hypoglycemia only if liver glycogen is available. It is of little or no help in states of starvation, adrenal insufficiency, or chronic hypoglycemia. Glucagon is also indicated in patients with life-threatening anaphylaxis, who are refractory to epinephrine or use beta blockers.

CONTRAINDICATIONS

Since glucagon is a protein, hypersensitivity is a possibility.

DOSE

0.5 - 1 mg IM/SQ or IV.

SIDE EFFECTS

Glucagon is relatively free of adverse reactions except for occasional nausea and vomiting, which may also occur with hypoglycemia.

LIDOCAINE (Xylocaine)

THERAPEUTIC EFFECTS

Suppresses ventricular ectopic activity by decreasing the excitability of heart muscle and the cardiac conduction system.

INDICATIONS

To SUPPRESS PREMATURE VENTRICULAR CONTRACTIONS (PVC's) when:

- 1). They occur in the context of myocardial ischemia.
- 2). They are frequent (more than 6/min.).
- 3). They occur in salvos (two or more in a row).
- 4). They fall on the T wave (R-on-T phenomenon).
- 5). They are multifocal (of different shapes and sizes).

CONTRAINDICATIONS

- 1). Known history of allergy to lidocaine or local anesthetics (e.g., Novocain).
- 2). Second - or third - degree heart block.
- 3). Sinus bradycardia or sinus arrest.
- 4). Idioventricular rhythm.

SIDE EFFECTS

- 1). By decreasing the force of cardiac contractions as well as decreasing peripheral resistance, may cause a fall in cardiac output and blood pressure.
- 2). May cause numbness, drowsiness, or confusion.
- 3). When given in high doses, especially to the elderly or to patients in heart failure, may cause seizures.

HOW SUPPLIED

- 1). Prefilled syringes containing 100mg in 5ml (20mg/ml) for bolus injection.
- 2). Prefilled additive syringe 2gm for making up infusion solution.

ADMINISTRATION AND DOSAGE

Given by intravenous bolus and infusion. If an intravenous route cannot be established, lidocaine may be given via the endotracheal tube and the dosage increased to 3mg/kg.

Dosage: 1.5 mg/kg IV push followed by infusion of 2mg/min. To prepare the infusion, add 2gm of lidocaine to 500ml D5W, yielding a solution of 4mg/ml. Use a microdrip infusion set for administration. Reduce the dosage (both bolus and infusion) by half for patients in congestive heart failure or shock and for patients over 70 years old.

Lidocaine Drip Rates

Bolus Drip

1mg/kg 2mg/min.

2mg/kg 3mg/min.

3mg/kg 4mg/min.

Morphine Sulfate

THERAPEUTIC EFFECTS

- 1). Decreases pulmonary edema by pooling blood in the peripheral circulation thereby reducing venous return to the heart; helps as well to allay the anxiety associated with pulmonary edema.
- 2). Potent analgesic, providing significant relief of pain in acute myocardial infarction and other conditions.

INDICATIONS

To RELIEVE PAIN in myocardial infarction and other selected conditions.

CONTRAINDICATIONS

- 1). Marked hypotension.
- 2). Respiratory depression, except that caused by pulmonary edema, where the drug may be used if ventilatory support is provided.
- 3). Asthma and chronic obstructive pulmonary disease.
- 4). In patients who have taken other depressant drugs, such as alcohol or barbiturates.
- 5). Head injury.
- 6). Undiagnosed abdominal pain.

SIDE EFFECTS

- 1). Hypotension (most likely in volume-depleted patients).
- 2). Increased vagal tone, leading to bradycardia. (This effect can be reversed with atropine.)
- 3). Respiratory depression. (This effect can be reversed with naloxone.)
- 4). Nausea and vomiting.
- 5). Urinary retention.

HOW SUPPLIED

Prefilled (tubex) syringes containing 10mg.

ADMINISTRATION AND DOSAGE

Given by titrated intravenous injections.

Dosage

2mg by IV push every 10 minutes NOT TO EXCEED 10mg until the desired therapeutic effect is achieved. If hypotension occurs, keep the patient flat, and do not give more of the drug.
Watch for respiratory depression.

NALOXONE (Narcan)

THERAPEUTIC EFFECTS

Specific antidote for narcotic agents. Reverses the actions of all narcotic drugs, including heroin, morphine, methadone, codeine, Demerol, Dilaudid, Darvon, paregoric, and Percodan. Naloxone is thus effective in counteracting the effects of overdose from any of these agents. Naloxone will reverse stupor, coma, respiratory depression, etc., when these are due to narcotic overdose. It is not effective in reversing coma from other causes.

INDICATIONS

To treat known NARCOTIC OVERDOSE or coma suspected to be due to narcotic overdose.

CONTRAINDICATIONS

None.

SIDE EFFECTS

- 1). Too rapid administration may precipitate projectile vomiting and ventricular dysrhythmias.
- 2). Administration to people who are physically dependent on narcotics may cause an acute withdrawal syndrome. For this reason, naloxone should be given very slowly, using improvement of respiratory status as an end point.
- 3). In general, the duration of action of naloxone is shorter than that of the narcotics it is used to counteract. Thus, the patient who has been successfully roused with naloxone may fall back into stupor or coma as the naloxone wears off. These patients must therefore be watched closely, and the dose of naloxone should be repeated as necessary.

HOW SUPPLIED

10ml multi-dose vials, containing 4.0mg (0.4mg/ml).

ADMINISTRATION AND DOSAGE

In the field, given by slow intravenous injection.

Dosage

Draw up 0.4 - 0.8mg (1-2ml) of naloxone in a 10ml syringe. Administer this solution VERY SLOWLY IV while monitoring the rate and depth of the patient's respirations. As soon as there is improvement in the respirations, stop giving the drug. It is preferable that the patient NOT wake up fully in the field, as these patients may be violent when brought abruptly out of coma. USE RESPIRATIONS AS A GUIDE. If there is no response to two doses, suspect overdose with another, non-narcotic drug.

NITROGLYCERIN

THERAPEUTIC EFFECTS

The primary pharmacologic effect of nitroglycerin and related drugs is to relax smooth muscle, and the effects of nitroglycerin on the cardiovascular system are chiefly due to relaxation of vascular smooth muscle (hence vasodilation). Nitroglycerin provides relief of pain in angina, probably by dilating coronary arteries and thereby increasing blood flow through them as well as by decreasing myocardial oxygen demand. Through its vasodilating action on peripheral vessels, nitroglycerin promotes pooling of the blood in the systemic circulation and decreases the resistance against which the heart has to pump (the afterload); these effects may be useful in treating congestive heart failure and temporary treatment for severe Hypertension.

INDICATIONS

- 1). To relieve the pain of ANGINA.
- 2). To treat selected cases of PULMONARY EDEMA due to LEFT HEART FAILURE.

CONTRAINDICATIONS

- 1). Increased intracranial pressure.
- 2). Glaucoma.
- 3). Hypotension.
- 4). Recent Viagra use.

SIDE EFFECTS

- 1). Transient, throbbing headache. (If headache does not occur, suspect that the nitroglycerin is outdated and no longer potent).
- 2). Hypotension.
- 3). Dizziness, weakness.

HOW SUPPLIED

Sublingual spray, tablets, paste.

ADMINISTRATION AND DOSAGE

Given sublingually (under the tongue). the patient should be semisitting or recumbent.

Dosage

One 0.4mg tablet under the tongue or 1 metered dose of spray. 1-2cm of paste topically. May be repeat once after 5 minutes.

PROMETHAZINE (PHENERGAN)

THERAPEUTIC EFFECTS

Phenergan is most commonly used as an anti-emetic in the prehospital setting.

INDICATIONS

- 1). Nausea and vomiting.
- 2). Motion sickness.
- 3). To potentiate the effects of analgesics.
- 4). Sedation.

CONTRAINDICATIONS

- 1). Unresponsiveness.
- 2). Patients who have taken large amounts of depressants.

SIDE EFFECTS

- 1). Drowsiness.
- 2). Sedation.
- 3). Blurred vision.
- 4). Tachycardia.
- 5). Bradycardia.
- 6). Dizziness.
- 7). Acute Dystonia

HOW SUPPLIED

Ampules and Tubex syringes containing 25 mg of the drug in 1 ml of solvent.

ADMINISTRATION AND DOSAGE

Dosage is 6.25 to 12.5 IV or 12.5 to 25 mg deep IM. Take care to avoid accidental arterial injection. Should be diluted with 10 ml of saline.

If acute Dystonia occurs administer 25mg of Benadryl IM.

SODIUM BICARBONATE

THERAPEUTIC EFFECTS

By neutralizing excess acid, helps return the blood towards a physiologic pH, in which normal metabolic processes and sympathomimetic agents (such as epinephrine) work more effectively.

INDICATIONS

- 1). To treat METABOLIC ACIDOSIS, as in:
 - a. Certain POISONING (e.g., ethylene glycol).
 - b. SHOCK and other low-output states (e.g., after resuscitation from cardiac arrest).
- 2). To treat HYPERKALEMIA (high serum potassium).
- 3). To promote the excretion of some types of BARBITURATES taken in OVERDOSE.
- 4). Cardiac Toxicity due to TCA or Cocaine overdose.

CONTRAINDICATIONS

- 1). Hypokalemia (low serum potassium), sometimes detectable by large, prominent P waves and large U waves on the ECG.
- 2). Increased intracranial pressure.
 - 3). Glaucoma.
 - 4). Hypotension.

SIDE EFFECTS

- 1). Because each mEq of bicarbonate comes along with a mEq of sodium, sodium bicarbonate has the same effect as any other salt-containing infusion, i.e., it increases the vascular volume. Three 50ml syringes of sodium bicarbonate (1mEq/ml) contain approximately the same amount of salt as 1 liter of normal saline. Patients in borderline heart failure cannot tolerate salt loads of this magnitude.
- 2). Administration of sodium bicarbonate lowers serum potassium. In some cases, this is the desired effect, as when bicarbonate is used to treat hyperkalemia. However, in cardiac patients, if the potassium falls too low, the heart becomes irritable, and dysrhythmias may occur. This is especially likely in patients taking diuretics.
- 3). Sodium bicarbonate administration transiently raises the arterial carbon dioxide level, and thus its administration must be accompanied by controlled hyperventilation (e.g., with bag-valve-mask) to blow off this excess CO₂.

HOW SUPPLIED

Vials and prefilled syringes of 50ml, containing 1mEq/ml.

ADMINISTRATION AND DOSAGE

Given by intravenous bolus injection. As ordered by physician.

SOLU-MEDROL
(METHYLPREDNISOLONE)

THERAPEUTIC EFFECTS

Effective as an anti-inflammatory agent used to manage asthma, anaphylaxis, and spinal cord injury.

INDICATIONS

- 1). Spinal cord injury.
- 2). Anaphylaxis.
- 3). Asthma.
- 4). Exacerbation on COPD.
- 5). Sever Head Injury or Spinal Cord injury

CONTRAINDICATIONS

There are no major contraindications for Solu-Medrol in an emergency setting.

SIDE EFFECTS

- 1). Fluid retention.
- 2). Congestive heart failure.
- 3). Hypertension.
- 4). Abdominal distention.
 - 5). Vertigo.
 - 6). Headache.
 - 7). Nausea.
 - 8). Malaise.
 - 9). Hiccups.

HOW SUPPLIED

Supplied in vials containing 125 and 250 mg. The drug must be reconstituted prior to administration. 2.5 grams required for adult spinal cord injury.

DOSAGE

Contact Medical Control for appropriate dosage prior to administration.

Zofran

THERAPEUTIC EFFECTS

Selective 5-HT₃ receptor antagonist used to treat nausea and vomiting.

INDICATIONS

Treatment of nausea and vomiting, especially in patients when mental status needs to be evaluated (intracranial hemorrhage, stroke, head trauma, etc).

CONTRAINDICATIONS

Known sensitivity to the drug

SIDE EFFECTS

1. Dizziness
2. Fatigue
3. Dry mouth

HOW SUPPLIED

4mg/2ml vial (2mg/ml)

ADMINISTRATION AND DOSAGE

Adult dose: 4mg over at least 30 seconds, preferably over 2-5 minutes.

Pediatric dose: <40 kg = 0.1 mg/kg; >40 kg = 4mg.

EMS DISPATCH DIRECTORY

Dispatch Center	Frequency (MHz)	PL Tone (Hz)
Bland County Sherriff's Dept. — Bland	155.955 RX 153.905 TX	141.3
Bluefield, VA Police Dept.	155.175	82.5
Bristol Station A	462.975 RX 467.975 TX	179.9
Buchanan County Sherriff's Dept. — Grundy	155.160	192.8
Carroll County Sherriff's Dept. — Hillsville	155.265	107.2
Dickenson County Sherriff's Dept. — Clintwood	155.265	229.1
Galax Police Dept.	155.175	107.2
Grayson County Sherriff's Dept. — Independence (Point Lookout)	155.940 RX 153.815 TX	114.8
Lee County Sherriff's Dept. — Jonesville	155.160	229.1

Dispatch Center	Frequency (MHz)	PL Tone (Hz)
Norton Police Dept.	155.175	229.1
Richlands Police Dept.	155.175	82.5
Russell County	155.295	88.5
Central Dispatch	155.205	88.5
— Lebanon	155.085 RX	
	158.955 TX	88.5
Scott County	155.235	229.1
Central Dispatch	154.340 RX	
— Gate City	153.950 TX	131.8
Smyth County Control	155.280	82.5
— Marion		
Tazewell County	155.175	82.5
Central Dispatch		
Washington County	155.160	88.5
Central Dispatch	155.865	88.5
	155.205	88.5
Wise County	155.175	229.1
Central Dispatch		
Wythe County	155.160	141.3
Sherriff's Dept.		

HOSPITAL DIRECTORY**BLUEFIELD REGIONAL MEDICAL CENTER**

500 Cherry Street, Bluefield, WV

ER Phone No. — (304) 327-1500

VHF Frequencies

155.340

VHF CTCSS N/A

VHF Dial N/A

BRISTOL REGIONAL MEDICAL CENTER**TRAUMA CENTER-LEVEL II**

1 Medical Park Blvd., Bristol, TN 37620

ER Phone No. — (423) 844-2100

VHF Frequencies 155.340

VHF CTCSS 88.5

VHF Dial 023

MED Channels MED Tones

4, 7 179.9

BUCHANAN GENERAL HOSPITAL - SLATE CREEK

Route 5, P. O. Box 20, Grundy, VA 24614

ER Phone No. — (276) 935-1155

VHF Frequencies 155.340

VHF CTCSS 192.8

HOSPITAL DIRECTORY**BLUEFIELD REGIONAL MEDICAL CENTER**

500 Cherry Street, Bluefield, WV

ER Phone No. — (304) 327-1500

VHF Frequencies 155.340

VHF CTCSS N/A

VHF Dial N/A

BRISTOL REGIONAL MEDICAL CENTER**TRAUMA CENTER-LEVEL II**

1 Medical Park Blvd., Bristol, TN 37620

ER Phone No. — (423) 844-2100

VHF Frequencies 155.340

VHF CTCSS 88.5

VHF Dial 023

MED Channels MED Tones

4, 7 179.9

BUCHANAN GENERAL HOSPITAL - SLATE CREEK

Route 5, P. O. Box 20, Grundy, VA 24614

ER Phone No. — (276) 935-1155

VHF Frequencies 155.340

VHF CTCSS 192.8

HOSPITAL DIRECTORY**CLINCH VALLEY MEDICAL CENTER**

2949 West Front Street, Richlands, VA

ER Phone No. — (276) 596-6153

VHF Frequencies 155.340

VHF CTCSS 82.5

DICKENSON COMMUNITY HOSPITAL

312 Hospital Dr, Clintwood, VA 24228

ER Phone No. — (276) 926-0312

VHF Frequencies 155.340

VHF CTCSS 229.1

VHF Dial N/A

HOLSTON VALLEY MEDICAL CENTER**TRAUMA CENTER - LEVEL I**

130 W. Ravine Road, Kingsport, TN 37664

EMS Line — (423) 224-5121 (Most Direct)

VHF Frequencies 155.340

VHF CTCSS N/A

VHF Dial 026

MED Channels MED Tones

2, 4, 6, 8 173.8

HOSPITAL DIRECTORY**INDIAN PATH HOSPITAL**

2000 Brookside Drive, Kingsport, TN

ER Phone No. — (423) 392-7134

VHF Frequencies 155.340

VHF CTCSS N/A

VHF Dial 049

**JOHNSON CITY MEDICAL CENTER HOSPITAL TRAUMA
CENTER - LEVEL I**

400 North State of Franklin Road, Johnson City, TN

ER Phone No. — (423) 431-6561

VHF Frequencies 155.340

VHF CTCSS MUST BE ACCESSED BY ENCODER, if you have no encoder,
CONTACT: “Johnson City Med Comm” on 155.205 to encode.

VHF Dial 03555

JOHNSTON MEMORIAL HOSPITAL

351 North Court Street, Abingdon, VA 24210

ER Phone No. — (276) 628-3821

VHF Frequencies 155.340 / 155.400

VHF CTCSS 88.5

HOSPITAL DIRECTORY

LEE REGIONAL MEDICAL CENTER

Harrell Street, P. O. Box 70, Pennington Gap, VA 24277

ER Phone No. — (276) 546-1440

VHF Frequencies 155.340

VHF CTCSS N/A

LONESOME PINE HOSPITAL

Holston Avenue, Drawer I, Big Stone Gap, VA 24219

ER Phone No. — (276) 523-3111

VHF Frequencies 155.340

VHF CTCSS 110.9

NORTON COMMUNITY HOSPITAL

100 15th Street, North West, Norton, VA 24273

ER Phone No. — (276) 679-9648

VHF Frequencies 155.340

VHF CTCSS 229.1

HOSPITAL DIRECTORY**PULASKI COMMUNITY HOSPITAL**

2400 Lee Highway, P. O. Box 759, Pulaski, VA 24301

ER Phone No. — (540) 980-6192

VHF Frequencies 155.340

VHF CTCSS 146.2

VHF Dial NONE

MED Channels MED Tones

1, 3, 4, 7, 9, 10 103.5

103.5 (Access on MED 9/10 via Pulaski SO)

RUSSELL COUNTY MEDICAL CENTER

Carroll & Tate Streets, Call Box 3600, Lebanon, VA 24266

ER Phone No. — (276) 883-8200

VHF Frequencies 155.385, 155.340

VHF CTCSS 88.5

MOUNTAIN VIEW REGIONAL MEDICAL CENTER

Third Street, North East, Norton, VA 24273

ER Phone No. — (276) 679-1151

VHF Frequencies 155.340

VHF CTCSS 229.1

HOSPITAL DIRECTORY

SMYTH COUNTY COMMUNITY HOSPITAL

P. O. Box 880, Marion, VA 24354

ER Phone No. — (276) 782-1380

VHF Frequencies 155.340

VHF CTCSS 151.4

TAZEWELL COMMUNITY HOSPITAL

141 Ben Bolt Avenue, Rt. 1, P. O. Box 607, Tazewell, VA 24651

ER Phone No. — (276) 988-2506

VHF Frequencies 155.340

VHF CTCSS 82.5

VHF Dial 2222

TWIN COUNTY REGIONAL HOSPITAL

200 Hospital Drive, Galax, VA 24333

ER Phone No. — (276) 236-8181

VHF Frequencies 155.340

VHF CTCSS 114.8

VHF Dial 172-6822

HOSPITAL DIRECTORY

VETERAN'S ADMINISTRATION MOUNTAIN HOME HOSPITAL

Johnson City, TN 37684

ER Phone No. — (423) 926-1171 Ext. 7521

VHF Frequencies 155.340

VHF CTCSS N/A

VHF Dial 03888

WYTHE COUNTY COMMUNITY HOSPITAL

600 West Ridge Road, Wytheville, VA 24382

ER Phone No. — (276) 228-0258

VHF Frequencies 155.340

VHF CTCSS 141.3