ALL-LEVEL CONSOLIDATED

Field Treatment Protocols

OSF Saint James EMS System

Version 1.1 (7/10/2019)

Medical Directors:
Neal Rushforth, MD
Matthew Jackson, MD

EMS System Coordinator:
Andrew Larsen, BS, Paramedic, LI

OSF HEALTHCARE
Saint James John W Albrecht Medical Center

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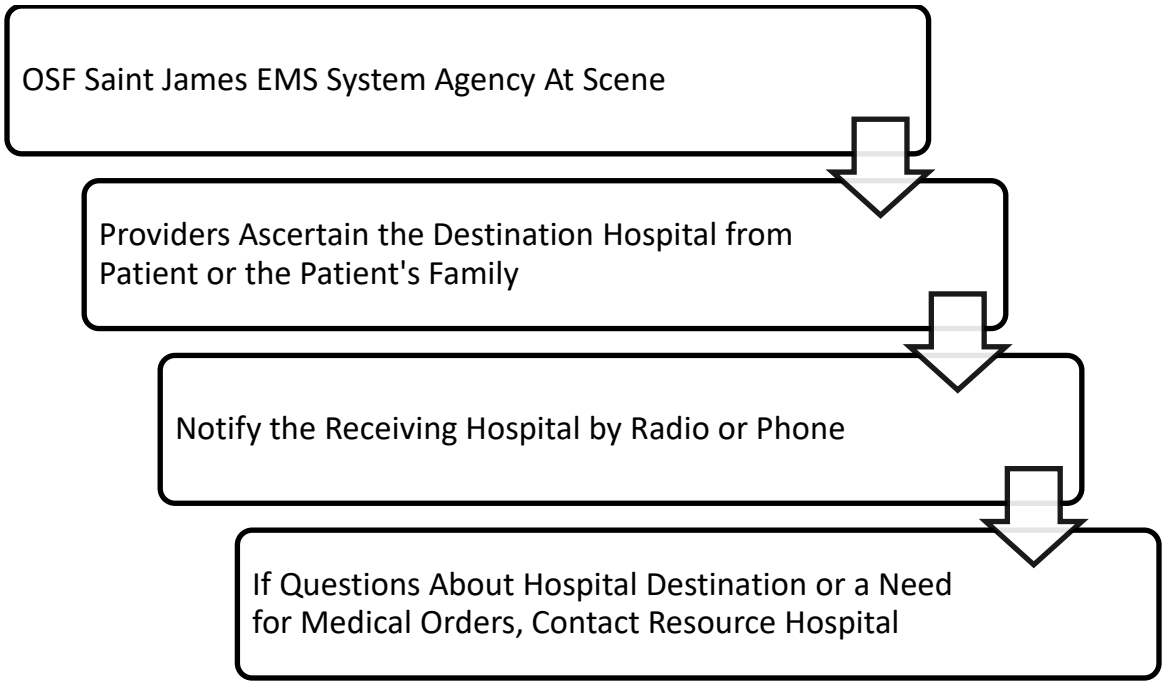
Acceptable Abbreviations

1^{o}	first degree
2^{o}	second degree
3^{o}	third degree
♀	female
♂	male
@	at
abd	abdomen
AC	antecubital
ACS	acute coronary syndrome
AED	automated external defibrillator
AEMT	advanced emergency medical technician
a-fib	atrial fibrillation
a-flutter	atrial flutter
AHA	American Heart Association
ALS	advanced life support
AM	between 12 midnight & 12 noon
A.M.A.	against medical advice
AMI	acute myocardial infarction
amt	amount
ant	anterior
approx.	approximately
ARC	American Red Cross
AROM	active range of motion
ASA	aspirin (acetylsalicylic acid)
AV	arteriovenous (as in AV graft or AV shunt)
BLS	basic life support
BP or B/P	blood pressure
BPM	beats per minute
BVM	bag valve mask
^{o}C	degrees Celsius
CABG	coronary artery bypass graft
CAO	conscious, alert, oriented
CCT	Critical Care Transport
CHF	congestive heart failure
CNS	central nervous system
c/o	complaint(s) of
COPD	chronic obstructive pulmonary disease
CP	chest pain
CPAP	continuous positive airway pressure
CPR	cardiopulmonary resuscitation
CVA	cerebrovascular accident (stroke)
Δ	change
D.A.S.	dead at scene
D/C	discontinue
dL	deciliter
DNR	do not resuscitate (order)
D.O.A.	dead on arrival
D5W	5% dextrose in water
ECG or EKG	electrocardiogram
ECRN	emergency communications radio nurse
E.D.	emergency department
EMR	emergency medical responder
EMS	emergency medical services
EMT	emergency medical technician
EMT-B	emergency medical technician - basic
EMT-I	emergency medical technician - intermediate
EMT-P	emergency medical technician - paramedic
ET or ETT	endotracheal tube
ETA	estimated time of arrival
ETOH	alcohol
^{o}F	degrees Fahrenheit
F.B.	foreign body
FR	first responder
FR-D	first responder – defibrillation
ft	foot/ feet
GCS	Glasgow coma score
GERD	gastro esophageal reflux disease
GI	gastro-intestinal
GLF	ground-level fall
grav.	Gravida (number of pregnancies)
GSW	gunshot wound
gtts	drops
hx	history
ICU	intensive care unit
IDDM	insulin dependent diabetes mellitus
ILS	intermediate life support
IM	intramuscular
IN	intra-nasal

IO	intraosseous
irreg	irregular
IV	intravenous
IVP	intravenous push
J	Joules
JVD	jugular vein distention
kg	kilogram
l	liter
lb	pound
LLQ	left lower quadrant
LMP	last menstrual period
LSB	long spine board
LOC	loss of consciousness
lpm	liters per minute
LR	Lactated Ringer's
lt or Ⓛ	left
LUQ	left upper quadrant
MAE	moves all extremities
MCA	motorcycle accident
MCAEMS(S)	McLean County Area EMS (System)
mcg	microgram
mEq	milliequivalent
mg	milligrams
M.I.	myocardial infarction
min	minute
ml	milliliter
mmHg	millimeters of mercury
MVC	motor vehicle collision
NC	nasal cannula
NIDDM	non-insulin dependent diabetes mellitus
NKA	no known allergies
NG	nasogastric
NRB	nonrebreather mask
NS	normal saline (0.9% saline)
NSR	normal sinus rhythm
NTG	nitroglycerin
N/V/D	nausea/ vomiting/ diarrhea
Ø	no, none
O_2	oxygen
O.D.	right eye
OD	overdose
OG	Orogastric
O.S.	left eye
O.U.	both eyes
P	pulse
para	children (number of live births)
PAT	paroxysmal atrial tachycardia
PCS	pediatric coma score
P.E.	physical exam
PE	pulmonary embolism
PEA	pulseless electrical activity
per	by way of
PERRL	pupils equal round and react to light
PM	between 12 noon & 12 midnight
po	per os (by mouth)
POLST	Physician Orders for Life Sustaining Treatment
pr	per rectal
PSVT	paroxysmal supraventricular tachycardia
pt.	patient
PTCA	percutaneous thrombolytic coronary angioplasty
PVC	premature ventricular contraction
PVD	peripheral vascular disease
Q or q	every
RR	respiratory rate
ROM	range of motion
ROSC	return of spontaneous circulation
rt or Ⓡ	right
RUQ	right upper quadrant
SBP	systolic blood pressure
SL	sublingual
SMO	standing medical order
SMR	spinal motion restriction
SpO2	saturation of peripheral oxygen (pulse oximetry)
SQ	subcutaneous
SVT	supraventricular tachycardia
T	temperature
TBSA	total body surface area
TKO	to keep open
TXA	Tranexamic Acid
VF	ventricular fibrillation
VT	ventricular tachycardia
X	times
y.o.	year old

Communications Flow



NO RESPONSE FROM RECEIVING HOSPITAL

If you receive no response from the destination hospital after repeated attempts, contact the Resource Hospital for patient report.

A written explanation (Incident Report Form) of each occurrence of radio communication failure must be completed by the involved prehospital provider and submitted to the OSF Saint James EMS System Office within 24 hours after the occurrence

COLOR NOTES

EMR/FR = GREEN

BLS = BLUE

ILS = PURPLE

ALS = RED

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Patient Radio Report

Contact should be made with the receiving hospital in a timely manner and the following information about each patient should be relayed. UNDERLINED information shall be relayed on all patients.

1) MERCI Identifier, highest level of care available on the unit (BLS, ILS, ALS)
2) Age, sex, family physician, patient weight.

3) Present complaint:
   a) Chief complaint/mechanism of injury/nature of illness.
   b) History of present illness or injury.

4) Physical exam/vital signs (repeated every 5 - 15 min.):
   a) Loss of consciousness/mental status
   b) Head to toe exam results
   c) Blood pressure
   d) Pulse
   e) Respirations/lung sounds
   f) Skin condition
   g) Pupils
   h) Other findings

5) History, including:
   a) Symptoms
   b) Allergies
   c) Medications
   d) Pertinent past medical history
   e) Last meal (if pertinent to condition)
   f) Events leading to this incident

6) ECG/12-lead findings, if applicable and pertinent.

7) Treatment provided and responses to treatment

8) ETA to hospital (actual transport time).

Points to remember:

- Transmit patient's initials only if requested by receiving hospital. If a name is requested, call receiving hospital on a secure telephone line.
- Radio transmissions need to be concise and include only pertinent information.
- If patient's condition precludes gathering all the above information, an initial report may be made with pertinent information. Then contact with more information and an update in patient's condition.
- If patient meets trauma, STEMI, sepsis or stroke criteria, receiving hospital shall be notified immediately with an early notification.

Miscellaneous Guidelines

AV FISTULAS, SHUNTS, AND GRAFTS

- Can be utilized in cardiac arrest if an IO cannot be established. Refer to *AV Fistulas, Shunts, and Grafts* procedure.

BLIND AIRWAY INSERTION DEVICES (BIAD)

- Only BIADs approved by the EMS System may be utilized.

IV ATTEMPTS

- No more than two (2) peripheral IV attempts shall be made while at scene. Up to two (2) more attempts may be made while enroute, if indicated. Peripheral IVs include IVs initiated on the extremities.
- Except during actual entrapment, all vascular access attempts on "load and go" patients shall be made while enroute to the receiving facility.

BLOOD DRAWS

- Labs should be drawn on all patients with IV/IO access. Refer to *Blood Draw* procedure for further guidance.

EXTERNAL JUGULAR IV ACCESS

- External jugular vein access can be considered only after IO and IV attempts have been exhausted. External jugular access should be considered as a last resort. External jugular access is a paramedic-only skill.

INTRAOSSEOUS INFUSIONS

- Intraosseous access may only be attempted by advanced providers. Only two attempts to establish an intraosseous infusion may be made.
- Intraosseous access may be utilized initially on any hemodynamically unstable patient. Providers are limited to 1 peripheral IV attempt on hemodynamically unstable patients.
- Intraosseous access shall be utilized initially on cardiac arrest patients.
- Only intraosseous access devices approved by the EMS System may be utilized.

MEDICAL CONTROL

- ECRNs may give medical control orders after consultation with an attending physician.

ENDOTRACHEAL INTUBATION

- No more than 2 attempts per advanced provider or 3 attempts total per patient shall be made.
- An attempt is defined as the laryngoscope blade inserted into the oral cavity unless a foreign obstruction was encountered.
- Bougie® Blind Intubation assistance device may be used in intubation attempts**.**
- Only intubation assist devices approved by the EMS System may be utilized.

STANDARD PRECAUTIONS

EMS personnel should use common-sense precautions against transmission of infectious/contagious diseases when caring for any patient. Appropriate personal protective equipment must be worn when exposure to blood or other potentially infectious materials is reasonably anticipated. Reference the *Communicable Disease Policy* for more information. Providers shall be familiar with their agency's infection control policies and procedures.

Fluid Note
Lactated Ringers will be the primary fluid for our EMS system. However, in the event of a shortage, Normal Saline may be used as a substitute for all protocols that use Lactated Ringers. This is only applicable during a shortage.

All medications given via infusion must use proper fluid which is described in procedures manual.

Drug Shortage
D10W can be substituted with D50 if D10W is on shortage or unavailable. The dose is 25g of D50 titrated to affect.

Cardiac Care

ROUTINE CARDIAC CARE

FR/EMR

1. Determine patient level of consciousness.
2. Establish/confirm airway patency.
3. Assess breathing and circulation.
4. Obtain pulse oximetry reading.
5. Administer supplemental **OXYGEN** per *Oxygen Administration* procedure.
6. Obtain vital signs.
7. Loosen patient's restrictive clothing.
8. Place patient in position of comfort.
9. Ensure EMS transport has been activated.
10. Obtain patient history (including DNR/POLST status).
11. Reassess patient every 5 minutes.

BLS

1. Determine patient level of consciousness.
2. Establish/confirm airway patency.
3. Assess breathing and circulation.
4. Obtain pulse oximetry reading.
5. Administer supplemental **OXYGEN** per *Oxygen Administration* procedure.
6. Obtain vital signs.
7. Apply and obtain 12-lead ECG and transmit (required for all transport vehicles). Repeat 12-leads should be obtained every 10 minutes or during any change in patient condition. Provide and early notification to receiving hospital for positive STEMI findings.
8. Loosen patient's restrictive clothing.
9. Place patient in position of comfort.
10. Initiate advanced level intercept.
11. Obtain patient history (including DNR/POLST status).
12. Reassess patient every 5 minutes.

ILS

1. Determine patient level of consciousness.
2. Establish/confirm airway patency.
3. Assess breathing and circulation.
4. Obtain pulse oximetry reading.
5. Administer supplemental **OXYGEN** per *Oxygen Administration* procedure.

6. Obtain vital signs.
7. Apply, obtain, and interpret 12-lead ECG. Transmit any 12-lead ECGs that are confirmed STEMI or suspicious in nature. Repeat 12-leads should be obtained every 10 minutes or during any change in patient condition. Provide an early notification to receiving hospital for positive STEMI findings.
8. Loosen patient's restrictive clothing.
9. Place patient in position of comfort.
10. Obtain patient history (including DNR/POLST status).
11. Initiate IV **Lactated Ringers** TKO (20ml/hr) OR saline lock. If systolic BP < 90mmHg and patient's lungs are clear, administer 250mL bolus IV. If no improvement, may repeat bolus once.
12. Reassess patient every 5 minutes.

ALS

1. Determine patient level of consciousness.
2. Establish/confirm airway patency.
3. Assess breathing and circulation.
4. Obtain pulse oximetry reading.
5. Administer supplemental **OXYGEN** per *Oxygen Administration* procedure.
6. Obtain vital signs.
7. Apply, obtain, and interpret 12-lead ECG. Transmit any 12-lead ECGs that are confirmed STEMI or suspicious in nature. Repeat 12-leads should be obtained every 10 minutes or during any change in patient condition. Provide an early notification to receiving hospital for positive STEMI findings.
8. Loosen patient's restrictive clothing.
9. Place patient in position of comfort.
10. Obtain patient history (including DNR/POLST status).
11. Initiate IV **Lactated Ringers** TKO (20ml/hr) OR saline lock. If systolic BP < 90mmHg and patient's lungs are clear, administer 250mL bolus IV. If no improvement, may repeat bolus once.
12. Reassess patient every 5 minutes.

NOTES:

- It is recommended for non-transport vehicles to have 12-lead ECG capabilities if closest transport vehicle is greater than 10 minutes away.

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Cardiac Care

CHEST PAIN

FR/EMR

1. *Routine Cardiac Care* protocol.
2. Administer **ASA** (total dose 324 mg) chewable tablets.

BLS

1. *Routine Cardiac Care* protocol.
2. Administer **ASA** (total dose 324 mg) chewable tablets.
3. Obtain a 12-Lead EKG (If possible) prior to administration of Nitro
4. If systolic BP >90mmHg and patient continues to have chest pain, administer **NITROGLYCERIN** sublingual. May repeat every 5 minutes up to 3 times as long as systolic BP remains above 90mmHg.
5. Provide an early notification to receiving hospital with patient condition.

ILS

1. *Routine Cardiac Care* protocol.
2. Administer **ASA** (total dose 324 mg) chewable tablets.
1. If systolic BP >90mmHg and patient continues to have chest pain, administer **NITROGLYCERIN** sublingual. **See Notes regarding administration of Nitroglycerin pertaining to Inferior MI's**
3. May repeat every 5 minutes up to 3 times as long as systolic BP remains above 90mmHg.
4. Continue managing patient's pain per *Pain Control* Protocol until patient states pain is "0".

ALS

2. *Routine Cardiac Care* protocol.
3. Administer **ASA** (total dose 324 mg) chewable tablets.
4. If systolic BP >90mmHg and patient continues to have chest pain, administer **NITROGLYCERIN** sublingual. May repeat every 5 minutes up to 3 times as long as systolic BP remains above 90mmHg. Discontinue sublingual administration once IV drip or is initiated. **See Notes regarding administration of Nitroglycerin pertaining to Inferior MI's**.
5. Continue managing patient's pain per *Pain Control* Protocol until patient states pain is "0".
6. If available, administer **NITROGLYCERIN** infusion starting at 10mcg/min IV. If no improvement after 5 minutes increase by 10mcg/min until pain is relieved or a max of 50mcg/minute is reached. If patient continues to have chest pain then contact **MEDICAL CONTROL** for further instructions. Discontinue nitroglycerin infusion if SBP is below 90 mmHg.

NOTES:

- DO NOT give ASA to a patient with a history of ASA allergy. Consult Medical Control before administering if patient has a history of ulcer disease.
- ASA shall not be administered if appropriate dose was given immediately prior to arrival. If ASA was administered immediately prior to arrival, but total dose was under 324mg, administer additional ASA to ensure cumulative dose of 324 mg.
- Do not give nitroglycerin to patients who have taken phosphodiesterase inhibitors (For example Viagra, Cialis, or Levitra) within the past 48 hours. Contact medical control for orders.
- Contact medical control prior to administering nitroglycerin if heart rate is greater than 130.
- Contact medical control prior to administering fentanyl if heart rate is greater than 130.
- IM medication should be avoided in patients with suspected AMI.
- **ILS/ALS providers only: If patient has an inferior wall MI consider withholding Nitroglycerin if any of the following are present**
    - **Systolic Blood Pressure <140 mmHg**
    - **Heart rate <60**
    - **Heart rate > 100**

  ***contact MEDICAL CONTROL for further guidance**
- Nitroglycerin drips must be administered utilizing specialized tubing and a pump. No other medications may be administered through the nitroglycerin tubing.
- Anytime a nitroglycerin drip is administered, a second IV line must be initiated.

Notes

- **STEMI Alert Criteria:**
    - **BLS –** If 12-lead read out states "SUSPECTED STEMI, ACUTE STEMI SUSPECTED, SUSPECTED MI" transmit 12-lead to receiving hospital and call a **STEMI Alert**
    - **ILS/ALS –** If a patients EKG shows elevation of at least 1mm in two or more anatomically contiguous leads, call a **STEMI Alert**

Cardiac Care

CARDIOPULMONARY ARREST

FR/EMR

1. Initiate CPR if not already in progress. Follow AHA guidelines.
2. Utilize BVM for ventilatory support.
3. Check for pulse after 2 minutes. If no pulse resume CPR.
4. As soon as available, apply defibrillator/AED. Follow prompts on AED.
5. Insert system approved blind insertion airway device (BIAD). Once in place, ventilate with BVM with 15 l supplemental oxygen at a rate of 8-10 breaths per minute.
6. Ensure transport EMS has been activated. Request advanced intercept early.

BLS

1. Initiate CPR if not already in progress. Follow AHA guidelines.
2. Utilize BVM for ventilatory support.
3. Check for pulse after 2 minutes. If no pulse resume CPR.
4. As soon as available, apply defibrillator/AED. Follow prompts on AED.
5. Insert system approved blind insertion airway device (BIAD). Once in place, ventilate with BVM with 15 l supplemental oxygen at a rate of 8-10 breaths per minute.
6. Request advanced intercept early.
7. Prepare patient for rapid transport; remain on scene if ALS intercept is within 15 minutes.

ILS

1. Initiate CPR if not already in progress. Follow AHA guidelines.
2. Utilize BVM for ventilatory support.
3. Check for pulse after 2 minutes. If no pulse resume CPR.
4. As soon as available, apply cardiac monitor/defibrillator.
5. Initiate two (2) vascular access sites of **Lactated Ringers** at TKO (20ml/hr).
6. Maintain system approved blind insertion airway device (BIAD) if already in place or intubate/place BIAD. Ventilate with BVM with 15 l supplemental oxygen at a rate of 8-10 breaths per minute. Utilize capnography, if available.
7. Request ALS intercept early.
8. Follow appropriate protocol/guideline based on patient heart rhythm.
9. If no ROSC, institute *Cardiac Resuscitation vs. Cease Efforts and Coroner Notification* policy.

ALS

1. Initiate CPR if not already in progress. Follow AHA guidelines.
2. Utilize BVM for ventilatory support.
3. Check for pulse after 2 minutes. If no pulse resume CPR.
4. As soon as available, apply cardiac monitor/defibrillator.
5. Initiate two (2) vascular access sites of **Lactated Ringers** at TKO (20ml/hr).

6. Maintain system approved blind insertion airway device (BIAD) if already in place or intubate/place BIAD. Ventilate with BVM with 15 l supplemental oxygen at a rate of 8-10 breaths per minute. Utilize capnography, if available.
7. Follow appropriate protocol/guideline based on patient heart rhythm.
8. Insert orogastric tube.
9. If no ROSC is observed, AND 3 doses of epinephrine have been administered, administer **Sodium Bicarbonate** 50 mEq IV/IO slow.
10. If no ROSC, institute *Cardiac Resuscitation vs. Cease Efforts and Coroner Notification* policy.

NOTES:

- Always consider and treat the H's and T's: Hypovolemia, Hypoxia, Hydrogen ion (acidosis), Hypo-/Hyperkalemia, Hypothermia, Tension pneumothorax, Tamponade (cardiac), Toxins, Thrombosis (pulmonary and coronary).
- When appropriate, institute *Cardiac Resuscitation vs. Cease Efforts and Coroner Notification* policy.
- **Consider adding peds ambu for cardiac arrests in adults** (lower tidal volume and lower rates improve survivability and ROSC). 1 breath per 10 compressions.

Cardiac Care

CARDIOPULMONARY ARREST – VENTRICULAR FIBRILLATION/TACHYCARDIA

FR/EMR, BLS

1. *Cardiopulmonary Arrest* Protocol.

ILS

1. *Cardiopulmonary Arrest* Protocol.
2. After first shock, continue CPR per current AHA guidelines. **EPINEPHRINE** (1:10,000) 1 mg IV/IO.
3. Confirm cardiac rhythm and pulselessness. If pulseless and still in shockable rhythm, defibrillate with one shock (monophasic: 360 joules; biphasic: device specific or 200 joules).
4. Continue CPR per current AHA guidelines.
5. Confirm cardiac rhythm and pulselessness. If pulseless and still in shockable rhythm, defibrillate with one shock (monophasic: 360 joules; biphasic: device specific or 200 joules).
6. Continue CPR per current AHA guidelines.
7. **AMIODARONE** 300 mg IV/IO.
8. Confirm cardiac rhythm and pulselessness. If pulseless and still in shockable rhythm, defibrillate with one shock (monophasic: 360 joules; biphasic: device specific or 200 joules).
9. **EPINEPHRINE** 1 mg IV/IO.
10. Confirm cardiac rhythm and pulselessness. If pulseless and still in shockable rhythm, defibrillate with one shock (monophasic: 360 joules; biphasic: device specific or 200 joules).
11. **AMIODARONE** 150 mg IV/IO.
12. Confirm cardiac rhythm and pulselessness. If pulseless and still in shockable rhythm, defibrillate with one shock (monophasic: 360 joules; biphasic: device specific or 200 joules).
13. **EPINEPHRINE** 1 mg IV/IO. Repeat every 3-5 minutes as long as patient remains pulseless.
14. Confirm cardiac rhythm and pulselessness. If pulseless and still in shockable rhythm, defibrillate with one shock (monophasic: 360 joules; biphasic: device specific or 200 joules).
15. Transport. Continue #14 as appropriate.

ALS

1. *Cardiopulmonary Arrest* Protocol.
2. After first shock, continue CPR per current AHA guidelines. **EPINEPHRINE** (1:10,000) 1 mg IV/IO.
3. Confirm cardiac rhythm and pulselessness. If pulseless and still in shockable rhythm, defibrillate with one shock (monophasic: 360 joules; biphasic: device specific or 200 joules).
4. Continue CPR per current AHA guidelines.

5. Confirm cardiac rhythm and pulselessness. If pulseless and still in shockable rhythm, defibrillate with one shock (monophasic: 360 joules; biphasic: device specific or 200 joules).
6. Continue CPR per current AHA guidelines.
7. **AMIODARONE** 300 mg IV/IO.
8. Confirm cardiac rhythm and pulselessness. If pulseless and still in shockable rhythm, defibrillate with one shock (monophasic: 360 joules; biphasic: device specific or 200 joules).
9. **EPINEPHRINE** 1 mg IV/IO.
10. **MAGNESIUM SULFATE** 2g IV/IO over 1-2 minutes. Immediately follow with 50 ml flush.
11. Confirm cardiac rhythm and pulselessness. If pulseless and still in shockable rhythm, defibrillate with one shock (monophasic: 360 joules; biphasic: device specific or 200 joules).
12. **AMIODARONE** 150 mg IV/IO.
13. Confirm cardiac rhythm and pulselessness. If pulseless and still in shockable rhythm, defibrillate with one shock (monophasic: 360 joules; biphasic: device specific or 200 joules).
14. **EPINEPHRINE** 1 mg IV/IO. Repeat every 3-5 minutes as long as patient remains pulseless.
15. Confirm cardiac rhythm and pulselessness. If pulseless and still in shockable rhythm, defibrillate with one shock (monophasic: 360 joules; biphasic: device specific or 200 joules).
16. **SODIUM BICARBONATE** 50 mEq IV/IO. Immediately follow with 50 ml flush.
17. Confirm cardiac rhythm and pulselessness. If pulseless and still in shockable rhythm, defibrillate with one shock (monophasic: 360 joules; biphasic: device specific or 200 joules).
18. Transport. Continue #17 as appropriate.

NOTES:

- A 50ml flush/bolus must be given between medication administration
- Providers should follow appropriate protocol based on rhythm.
- **Consider adding peds ambu for cardiac arrests in adults** (lower tidal volume and lower rates improve survivability and ROSC). 1 breath per 10 compressions.

Cardiac Care

CARDIOPULMONARY ARREST – PULSELESS ELECTRICAL ACTIVITY

FR/EMR, BLS

1. *Cardiopulmonary Arrest* Protocol.

ILS

1. *Cardiopulmonary Arrest* Protocol.
2. **EPINEPHRINE** 1 mg IV/IO. Repeat every 3-5 minutes (IV/IO) as long as patient remains pulseless.
3. Continue CPR with rhythm checks every 2 minutes.

ALS

1. *Cardiopulmonary Arrest* Protocol.
2. **EPINEPHRINE** 1 mg IV/IO. Repeat every 3-5 minutes (IV/IO) as long as patient remains pulseless.
3. Continue CPR with rhythm checks every 2 minutes.
4. **SODIUM BICARBONATE** 50 mEq IV/IO

NOTES:

- Consider contacting medical control early in cases of traumatic PEA.
- **Consider adding peds ambu for cardiac arrests in adults** (lower tidal volume and lower rates improve survivability and ROSC). 1 breath per 10 compressions.

Cardiac Care

CARDIOPULMONARY ARREST – ASYSTOLE

FR/EMR, BLS

1. *Cardiopulmonary Arrest* Protocol.

ILS

1. *Cardiopulmonary Arrest* Protocol.
2. **EPINEPHRINE** 1 mg IV/IO. Repeat every 3-5 minutes (IV/IO) as long as patient remains pulseless.
3. Continue CPR with rhythm checks every 2 minutes.
4. Contact Medical Control for termination of resuscitative efforts in the field when the patient has been in asystole greater than 15 minutes and not responsive to ILS interventions.

ALS

1. *Cardiopulmonary Arrest* Protocol.
2. **EPINEPHRINE** 1 mg IV/IO. Repeat every 3-5 minutes (IV/IO) as long as patient remains pulseless.
3. Continue CPR with rhythm checks every 2 minutes.
4. **SODIUM BICARBONATE** 50 mEq IV/IO.
5. Contact Medical Control for termination of resuscitative efforts in the field when the patient has been in asystole greater than 15 minutes and not responsive to ALS interventions.

NOTES:

TERMINATION OF RESUSCITATION (Medical) IF ANY DOUBT EXISTS, INITIATE RESUSCITATION AND TRANSPORT 1. PURPOSE This protocol is designed to guide the provider in determining a futile resuscitation and managing the patient after this determination. There is a body of evidence that shows when a pre-hospital cardiac arrest victim reliably meets the criteria below; there is no chance of survival to hospital discharge. **This protocol CANNOT be initiated without calling medical control for a Physician Order Only.** 2. PROCEDURE 1. Exclusions to this protocol. a. If arrest is believed to be secondary to hypothermia or submersion, treat according to appropriate protocol and transport to the nearest appropriate facility. b. If patient is pregnant, treat according to appropriate protocol and transport to the nearest appropriate facility. c. If patient has not reached their 18th birthday, treat according to appropriate protocol and transport to the nearest appropriate facility. 2. EMS providers may terminate resuscitation with medical direction call when all three criteria are met. a. The arrest was not witnessed by a bystander or EMS (and patient is unresponsive, pulseless, and apneic). AND b. There is no shockable rhythm identified by an AED or there is asystole or PEA on a manual cardiac monitor. AND c. There is no return of spontaneous circulation (ROSC) prior to decision to terminate resuscitation despite appropriate field EMS treatment that includes at least 15 minutes of minimally-interrupted EMS CPR

Cardiac Care

HYPOTENSIVE/CARDIOGENIC SHOCK

FR/EMR, BLS

1. Routine Cardiac Care.

ILS

1. Routine Cardiac Care.
2. If lungs are clear, 250 ml bolus **LACTATED RINGERS.** May repeat if no response to initial bolus and lungs remain clear.
3. Contact **MEDICAL CONTROL** for further orders.

ALS

1. Routine Cardiac Care.
2. Push Dose **EPINEPHRINE - if transport less than 15 min to Medical Center**

Making push dose epinephrine

1. Take 1 saline flush 10ml, waste 1 ml of saline.
2. Draw up from Cardiac Epi 1; 10000 1ml into the 9ml saline flush, shake well.
3. The mixture now has 10 mL of epinephrine at 0.01 mg/mL (10 mcg/mL) concentration.
4. Use 1 ml (10 mcg) “pushes” IV to titrate to a systolic blood pressure > 90 mmHg.

3. **LEVOPHED** infusion at 2mcg/min and titrate to SBP>90mmHg. Max dose of 12mcg/min

NOTES:

- If available, administer Levophed through IV pump.
- Mix 8ml/2 Vials of Levophed in 250ml of NS to achieve proper concentration

Cardiac Care

WIDE COMPLEX TACHYCARDIA - STABLE

FR/EMR, BLS, ILS & ALS

1. Routine Cardiac Care.

NOTES:

- STABLE: Patient is Conscious, alert, and oriented per their normal mentation AND hemodynamically stable

Cardiac Care

WIDE COMPLEX TACHYCARDIA - UNSTABLE

FR/EMR, BLS

1. Routine Cardiac Care.

ILS

1. Routine Cardiac Care.
2. Contact **MEDICAL CONTROL** for order to perform synchronized cardioversion. See *Defibrillation and Synchronized Cardioversion* Procedure. If patient does not have an altered mental status, pre-sedation of MIDAZOLAM 0.05mg/kg (max does of 5 mg) IV/IO/IN slowly.
3. After successful cardioversion, administer **AMIODARONE** 150mg over 10 minutes.

ALS

1. Routine Cardiac Care.
2. Synchronized cardioversion. See *Defibrillation and Synchronized Cardioversion* Procedure. If patient does not have an altered mental status, pre-sedation of **KETAMINE** 0.3 mg/Kg IV for pain control/anxiolysis. Consider **MIDAZOLAM** 0.05mg/kg (max does of 5 mg) IN slowly as an alternative if unable to secure IV or IO access.
3. After successful cardioversion, administer **AMIODARONE** 150mg over 10 minutes.
4. **AMIODARONE INFUSION** at 1mg/min.

NOTES:

- UNSTABLE: decreased level of consciousness, hypotension, severe chest pain, or severe pulmonary congestion.
- Anxiolysis – minimal sedation

Cardiac Care

NARROW COMPLEX TACHYCARDIA – STABLE (HR>150)

FR/EMR, BLS

1. Routine Cardiac Care.

ILS

1. Routine Cardiac Care.
2. If patient is less than 60 years, has no evidence of carotid bruit, no endartectomy scar, and no CVA history, perform Valsalva maneuver or carotid massage.
3. Consider giving a 20ml/kg fluid bolus to rule out hypovolemia/dehydration as cause of tachycardia.
4. **ADENOSINE** 6 mg rapid IV
5. If no change in rhythm after 2 minutes, **ADENOSINE** 12 mg rapid IV. May repeat once in 2 minutes if condition persists.
6. If rhythm persists, Contact **MEDICAL CONTROL** for order to perform synchronized cardioversion with pre-sedation of **MIDAZOLAM** 0.05mg/kg (max dose 5 mg) IV/IO/IN slowly. See *Defibrillation and Synchronized Cardioversion* Procedure.

ALS

1. Routine Cardiac Care.
2. If patient is less than 60 years, has no evidence of carotid bruit, no endartectomy scar, and no CVA history, perform Valsalva maneuver or carotid massage.
3. Consider giving a 20ml/kg fluid bolus to rule out hypovolemia/dehydration as cause of tachycardia.
4. **ADENOSINE** 6 mg rapid IV
5. If no change in rhythm after 2 minutes, **ADENOSINE** 12 mg rapid IV. May repeat once in 2 minutes if condition persists.
6. If rhythm persists, Contact **MEDICAL CONTROL** for order to perform synchronized cardioversion with pre-sedation of **KETAMINE** 0.3 mg/Kg IV for pain control/anxiolysis. Consider **MIDAZOLAM** 0.05mg/kg (max does of 5 mg) IN slowly as an alternative if unable to secure IV or IO access. See *Defibrillation and Synchronized Cardioversion* Procedure.

NOTES:

- STABLE: Patient is Conscious, alert, and oriented per their normal mentation AND hemodynamically stable

Cardiac Care

NARROW COMPLEX TACHYCARDIA – UNSTABLE (HR>150)

FR/EMR, BLS

1. Routine Cardiac Care.

ILS

1. Routine Cardiac Care.
2. Contact **MEDICAL CONTROL** for order to perform synchronized cardioversion. See *Defibrillation and Synchronized Cardioversion* Procedure. If patient does not have an altered mental status, pre-sedation of **MIDAZOLAM** 0.05mg/kg (max dose 5 mg) IV/IO/IN slowly**.**

ALS

1. Routine Cardiac Care.
2. Synchronized cardioversion. See *Defibrillation and Synchronized Cardioversion* Procedure. If patient does not have an altered mental status, pre-sedation of **KETAMINE** 0.3 mg/Kg IV for pain control/anxiolysis. Consider **MIDAZOLAM** 0.05mg/kg (max does of 5 mg) IN slowly as an alternative if unable to secure IV or IO access.

NOTES:

- UNSTABLE: decreased level of consciousness, hypotension, severe chest pain, or severe pulmonary congestion.

Cardiac Care

BRADYCARDIA – STABLE
(HR<60)

FR/EMR, BLS, ILS, ALS

1. Routine Cardiac Care.

NOTES:

- STABLE: Patient is Conscious, alert, and oriented per their normal mentation AND hemodynamically stable.
- Bradycardia may be a normal finding.

Cardiac Care

BRADYCARDIA – UNSTABLE
(Sinus Bradycardia, 1st Degree Heart Block, 2nd Degree Type I Heart Block)

FR/EMR, BLS

1. Routine Cardiac Care.

ILS

1. Routine Cardiac Care.
2. Administer **ATROPINE** 0.5 mg IO/IV. If a STEMI is identified on ECG, withhold atropine and contact **MEDICAL CONTROL** for guidance.
3. If no response in 3-5 minutes, repeat **ATROPINE** 0.5mg IO/IV. If patient condition improves, continue with atropine administration until patient becomes hemodynamically stable (or until maximum atropine dose of 3 mg has been given).
4. If no response after 2 doses of atropine contact **MEDICAL CONTROL** for further guidance, prepare for transcutaneous pacing with pre-sedation of **MIDAZOLAM** 0.05mg/kg (max dose 5 mg) IV/IO/IN. slowly.

ALS

1. Routine Cardiac Care.
2. Administer **ATROPINE** 0.5 mg IO/IV. If a STEMI is identified on ECG, withhold atropine and contact **MEDICAL CONTROL** for guidance.
3. If no response in 3-5 minutes, repeat **ATROPINE** 0.5mg IO/IV. If patient condition improves, continue with atropine administration until patient becomes hemodynamically stable (or until maximum atropine dose of 3 mg has been given).
4. If no response after 2 doses of atropine, begin transcutaneous pacing with sedation of **KETAMINE** 0.3 mg/Kg IV for pain control/anxiolysis. See *External Pacemaker* Procedure. Consider **MIDAZOLAM** as an alternative given IN 0.05mg/kg (max dose 5 mg) if unable to secure and IV or IO.

NOTES:

- Consider **LACTATED RINGERS** bolus (250 ml) if patient remains hypotensive. If patient remains hypotensive, refer to the *Hypovolemic/Cardiogenic Shock Protocol*.
- If CVA/neurologic injury is suspected, DO NOT ADMINISTER ATROPINE.
- "Improvement" is defined as an increase in heart rate with a corresponding increase in mentation and hemodynamic stability (blood pressure).
- UNSTABLE: decreased level of consciousness, hypotension, severe chest pain, or severe pulmonary congestion.

Cardiac Care

BRADYCARDIA – UNSTABLE
(2nd Degree Type II Heart Block, 3rd Degree Heart Block)

FR/EMR, BLS

1. Routine Cardiac Care.

ILS

1. Routine Cardiac Care.
2. **ATROPINE** 0.5 mg IV/IO.
3. Prepare for transcutaneous pacing. Contact **MEDICAL CONTROL** for further guidance. For patients who do not have an altered mental status, consider **MIDAZOLAM** 0.05mg/kg (Max dose of 5mg) IV/IO/IN slowly for pre-sedation for pacing.

ALS

1. Routine Cardiac Care.
2. **ATROPINE** 0.5 mg IV/IO.
3. Begin transcutaneous pacing. Consider sedation of **KETAMINE** 0.3 mg/Kg IV for pain control/anxiolysis. If unable to establish IV/IO access consider **MIDAZOLAM** 0.05mg/kg (max does of 5mg) IN slowly. See *Defibrillation and External Pacemaker Procedure*.

NOTES:

- If patient remains hypotensive, refer to the *Cardiogenic Shock Protocol*.
- "Improvement" is defined as an increase in heart rate with a corresponding increase in mentation and hemodynamic stability (blood pressure).
- UNSTABLE: decreased level of consciousness, hypotension, severe chest pain, or severe pulmonary congestion.

Medical Care

ROUTINE MEDICAL CARE

FR/EMR, BLS

1. Determine patient level of consciousness.
2. Establish/confirm airway patency.
3. Assess breathing and circulation.
4. Obtain pulse oximetry reading.
5. Administer supplemental **OXYGEN** per *Oxygen Administration* Procedure.
6. Obtain vital signs.
7. Loosen restrictive clothing.
8. Place patient in position of comfort. Treat patient in a calm, confident manner to prevent fear, panic, or other complications.
9. Ensure EMS transport has been activated.
10. Obtain patient history (including DNR/POLST status).
11. Reassess patient every 5 minutes.

ILS, ALS

1. Determine patient level of consciousness.
2. Establish/confirm airway patency.
3. Assess breathing and circulation.
4. Obtain pulse oximetry reading.
5. Administer supplemental **OXYGEN** per *Oxygen Administration* Procedure.
6. Obtain vital signs.
7. Loosen restrictive clothing.
8. Place patient in position of comfort. Treat patient in a calm, confident manner to prevent fear, panic, or other complications.
9. Obtain patient history (including DNR/POLST status).
10. Reassess patient every 15 minutes (stable) or 5 minutes (unstable).

Note

If patient does not fall under a specific protocol, treat using a Routine Medical Care Protocol. Ensure patients ABC's are treated.

Medical Care

ACUTE PULMONARY EDEMA

FR/EMR

1. Routine Medical Care.

BLS

1. Routine Medical Care.
2. Apply, obtain, and transmit 12-lead ECG.
3. If systolic blood pressure is greater than 100 mmHg, **NITROGLYCERIN** 0.4 mg SL. After 5 minutes and if systolic blood pressure is greater than 100 mmHg, apply **NITROGLYCERIN PASTE** (1").
4. Apply **CPAP** at 7 cm H_20 pressure. Contact **MEDICAL CONTROL** prior to initiating CPAP if systolic blood pressure is less than 100 mmHg.
5. Contact **MEDICAL CONTROL** to increase peep pressure up to 10 cm H_20 pressure.
6. Activate advanced level intercept.

ILS

1. Routine Medical Care.
2. Apply and obtain 12-lead ECG.
3. If systolic blood pressure is greater than 100 mmHg, **NITROGLYCERIN** 0.4 mg SL. After 5 minutes and if systolic blood pressure is greater than 100 mmHg, apply **NITROGLYCERIN PASTE** (1").
4. Apply **CPAP** at 7 cm H_2O pressure. Contact **MEDICAL CONTROL** prior to initiating CPAP if systolic blood pressure is less than 100 mmHg. If respiratory distress does not improve within 5 minutes and the patient is tolerating CPAP, increase CPAP pressure up to 10 cm H_2O.
5. Initiate saline lock.
6. Consider **Versed** 1 mg IV OR 2 mg IN (1 mg each nare) with **MEDICAL CONTROL** order. Do not administer if systolic blood pressure is less than 100 mmHg.

ALS

1. Routine Medical Care.
2. Apply and obtain 12-lead ECG.
3. If systolic blood pressure is greater than 100 mmHg, **NITROGLYCERIN** 0.4 mg SL.
4. Apply **CPAP** at 7 cm H_2O pressure. Contact **MEDICAL CONTROL** prior to initiating CPAP if systolic blood pressure is less than 100 mmHg. If the respiratory distress does not improve within 5 minutes and the patient is tolerating CPAP, increase CPAP pressure up to 10 cm H_2O.
5. Consider administering **Versed** 1 mg IV OR 2 mg IN (1 mg each nare) if patient is experiencing anxiety.
6. Initiate saline lock.

7. If systolic blood pressure is greater than 100mmHg, apply **NITROGLYCERIN PASTE** (1") OR if available, administer **NITROGLYCERIN INFUSION** of 5mcg/min IV. If no improvement after 5 minutes increase by 10mcg/min IV up to a max of 50mcg/min. Contact **MEDICAL CONTROL** for additional dosages.
8. If patient still remains in respiratory distress then contact **MEDICAL CONTROL** for further instructions.

NOTES:

- Continuously monitor respiratory adequacy. If patient condition continues to deteriorate, manually assisted ventilations with BVM may be needed.
- Nitroglycerin drips must be administered utilizing specialized tubing and a pump. No other medications may be administered through the nitroglycerin tubing.
- Anytime a nitroglycerin drip is administered a second IV line must be initiated.
- Immediately discontinue NTG paste and/or NTG infusion if SBP drops below 100 mmHg.
- Once NTG paste or infusion is initiated, do not administer NTG SL.

Medical Care

ASTHMA/COPD

FR/EMR

1. Routine Medical Care.
2. Assist patient with prescribed inhaler/nebulizer. Give 2-4 puffs every 2-5 minutes as needed.

BLS

1. Routine Medical Care.
2. **ALBUTEROL SULFATE**, 2.5 mg in 3 ml normal saline**,** mixed with **IPRATROPIUM** 0.5 mg via nebulizer. Albuterol/Ipratropium (Duo-Neb) may be repeated every 5 minutes if respiratory distress persists.
3. If no relief after one (1) EMS-administered albuterol treatments, apply CPAP at 5 cm H_20 pressure along with **ALBUTEROL SULFATE**, 2.5 mg in 3 ml normal saline**,** mixed with **IPRATROPIUM** 0.5 mg.
    a. Contact **MEDICAL CONTROL** prior to initiating CPAP if systolic blood pressure is less than 100 mmHg.
    b. Once three (3) doses (1.5mg) of ipratropium have been administered, then switch to continuous **ALBUTEROL SULFATE** nebulizer therapy.
4. *SUSPECTED ASTHMA ONLY*: If condition does not improve with albuterol, **EPINEPHRINE** auto-injector (Epi-Pen), 0.3 mg or 0.5 mg 1:1000 Epinephrine for IM approved agencies may be administered with **MEDICAL CONTROL** order.

ILS

1. Routine Medical Care
2. **ALBUTEROL SULFATE**, 2.5 mg in 3 ml normal saline**,** mixed with **IPRATROPIUM** 0.5 mg via nebulizer. Albuterol/Ipratropium (Duo-Neb) may be repeated every 5 minutes if respiratory distress persists.
3. Initiate IV **LACTATED RINGERS** TKO (20ml/hr) OR IV lock.
4. If no relief after one (1) EMS-administered albuterol treatments apply CPAP at 5 cm H_20 pressure along with continuous **ALBUTEROL SULFATE/IPRATROPIUM** nebulizer therapy.
    a. If the distress does not improve and the patient is tolerating CPAP, increase CPAP pressure to 10 cm H_2O. Continue to give nebulized treatments through CPAP.
    b. Contact **MEDICAL CONTROL** prior to initiating CPAP if systolic blood pressure is less than 100 mmHg.
    c. Consider **Versed** 1 mg IV OR 2 mg intranasal (1 mg each nare) prior to CPAP for anxiety.
    d. Once three (3) doses (1.5mg) of ipratropium have been administered, then switch to continuous **ALBUTEROL SULFATE** nebulizer therapy.
5. Continuous cardiac monitoring.
6. *SUSPECTED ASTHMA ONLY*: If no relief with nebulizer treatments and CPAP, **EPINEPHRINE 1:1000** 0.3 mg IM.

ALS

1. Routine Medical Care.
2. **ALBUTEROL SULFATE**, 2.5 mg in 3 ml normal saline**,** mixed with **IPRATROPIUM** 0.5 mg via nebulizer. Albuterol/Ipratropium (Duo-Neb) may be repeated every 5 minutes if respiratory distress persists.
3. Initiate IV **LACTATED RINGERS** TKO (20ml/hr) OR IV lock.
4. **METHYLPREDNISOLONE**, 125 mg IV.
5. If no relief, apply CPAP at 5 cm H_20 pressure along with continuous **ALBUTEROL SULFATE/IPRATROPIUM** nebulizer therapy.
    a. If the distress does not improve and the patient is tolerating CPAP, increase CPAP pressure up to 10 cm H_2O. Continue to give nebulized treatments through CPAP.
    b. Contact **MEDICAL CONTROL** prior to initiating CPAP if systolic blood pressure is less than 100 mmHg.
    c. Consider **Midazolam** 1 mg IV OR 2 mg intranasal (1 mg each nare) prior to CPAP for anxiety.
    d. Once three (3) doses (1.5mg) of ipratropium have been administered, then switch to **ALBUTEROL SULFATE** nebulizer therapy.
6. Continuous cardiac monitoring.
7. If no significant improvement following 5 minutes of CPAP, administer **MAGNESIUM SULFATE,** 2 grams in 250 mL **Normal Saline bag** and infuse over 6 - 10 minutes (60 gtt tubing at wide open). Contact **MEDICAL CONTROL** prior to administration if patient has a history of renal disease.
8. *SUSPECTED ASTHMA ONLY*: If no relief with nebulizer treatments, CPAP, magnesium sulfate, and methylprednisolone, **EPINEPHRINE 1:1000** 0.3 mg IM.

NOTES:

- If patient requires BVM assist, use in-line nebulizer.
- If available administer Magnesium Sulfate through IV pump 2g/100 ml at 600 ml/hr, for total administration time of 10 Minutes
- If patient is allergic to Ipratropium, give only Albuterol treatment.

Medical Care

ANAPHYLAXIS

FR/EMR

1. Routine Medical Care.
2. Assist patient with prescribed **EPINEPHRINE** auto-injector (Epi-Pen).

BLS

1. Routine Medical Care.
2. Administer **EPINEPHRINE** auto-injector (Epi-Pen) or 0.3 mg 1:1000 Epinephrine if IM approved agency. If no improvement, contact **MEDICAL CONTROL** for a repeat dose order.
3. If respiratory distress continues, administer **ALBUTEROL SULFATE**, 2.5 mg in 3 ml normal saline**,** mixed with **IPRATROPIUM** 0.5 mg via nebulizer. May repeat every 5 minutes.
4. **DIPHENHYDRAMINE** 50mg given orally
5. Initiate advanced level intercept.

ILS

1. Routine Medical Care.
2. **EPINEPHRINE** 1:1000 0.3 mg IM. May repeat once in 10 minutes if no improvement.
3. Initiate IV. Give 20 ml/kg bolus to maintain systolic BP > 90 mmHg.
6. If respiratory distress continues, administer **ALBUTEROL SULFATE**, 2.5 mg in 3 ml normal saline**,** mixed with **IPRATROPIUM** 0.5 mg via nebulizer. May repeat every 5 minutes.
4. **DIPHENHYDRAMINE** 50mg IV over 2-3 minutes.

ALS

1. Routine Medical Care.
2. **EPINEPHRINE** 1:1000 0.3 mg IM. May repeat once in 10 minutes if no improvement.
3. Initiate IV. Give 20 ml/kg bolus to maintain systolic BP > 90 mmHg.
4. If respiratory distress continues, administer **ALBUTEROL SULFATE** 2.5 mg in 3 ml NS mixed with **IPRATROPIUM** 0.5 mg via nebulizer. May repeat every 5 minutes.
5. **DIPHENHYDRAMINE** 50mg IV over 2-3 minutes.
6. **METHYLPREDNISOLONE** 125 mg IV.
7. Consider Push dose **EPINEPHRINE – if transport less than 15 min to Medical Center**
8. If systolic blood pressure remains < 90 mmHg after two (2) 20 ml/kg boluses, initiate **LEVOPHED** at 2mcg/min and titrate to SBP>90mmHg. Max dose of 12mcg/min

NOTES:

- If available administer Levophed through IV pump.
- Anaphylaxis is defined as hemodynamic instability and/or pending respiratory failure caused by an allergen.

Medical Care

ALLERGIC REACTION (NON-ANAPHYLAXIS)

FR/EMR

1. Routine Medical Care.

BLS

1. Routine Medical Care.
2. **DIPHENHYDRAMINE** 50mg given orally

ILS

1. Routine Medical Care.
2. **DIPHENHYDRAMINE** 50mg IV over 2-3 minutes or 50 mg IM.

ALS

1. Routine Medical Care.
2. If not previously administered**, DIPHENHYDRAMINE** 50mg IV/ over 2-3 minutes or 50 mg IM.

Medical Care

UNCONSCIOUSNESS/ALTERED LEVEL OF CONSCIOUSNESS/SYNCOPE

FR/EMR

1. Routine Medical Care.
2. Conduct FAST screen if neurologic cause suspected.
3. Check blood glucose level.
4. If patient is not breathing or not breathing adequately, assist with ventilations
5. If narcotic overdose is suspected, **NALOXONE**1 mg IN (½ each nare). Monitor for changes.
6. If no changes after 2-3 minutes, administer remaining **NALOXONE** 1 mg IN (½ each nare).

BLS

1. Routine Medical Care.
2. Conduct FAST screen if neurologic cause suspected.
3. Check blood glucose level.
4. If patient is not breathing or not breathing adequately, assist with ventilations
5. If narcotic overdose is suspected, **NALOXONE**1 mg IN (½ each nare). Monitor for changes.
6. If no changes after 2-3 minutes, administer remaining **NALOXONE** 1 mg IN (½ each nare).
7. If no changes after first 2mg, repeat **NALOXONE** 2 mg IN (½ each nare).
8. Obtain and transmit 12-lead ECG.

ILS

1. Routine Medical Care.
2. Conduct FAST screen if neurologic cause suspected.
3. Check blood glucose level.
4. If narcotic overdose is suspected, **NALOXONE** 0.4mg up to 2.0 mg IN (½ in each nare)/IV/IM/IO (titrate to return of adequate and spontaneous respirations).
5. Perform 12-lead ECG; transmit if indicated.
6. Initiate lock or IV.

ALS

1. Routine Medical Care.
2. Conduct FAST screen if neurologic cause suspected.
3. Check blood glucose level.
4. If narcotic overdose is suspected, **NALOXONE** 0.4mg up to 2.0 mg IN (½ in each nare)/IV/IM/IO (titrate to return of adequate and spontaneous respirations).

5. Perform 12-lead ECG.
6. Initiate lock or IV.
7. If unresponsive to treatments, nasogastric tube connected to low continuous suctioning.

NOTES:

- Altered level of consciousness can be caused by numerous conditions. Perform a physical exam and solicit a complete history to help determine underlying cause. Treat cause as appropriate.
- If capabilities are available, apply wave form capnography to monitor for respiratory drive

Medical Care

DIABETIC EMERGENCY

FR/EMR

1. Routine Medical Care.
2. If blood sugar is less than 60 mg/dL (or less than 80 mg/dL and exhibiting signs of hypoglycemia), and patient is conscious, able to swallow, and exhibiting signs of hypoglycemia, administer **ORAL GLUCOSE**. Alternatively, beverages or food items high in simple sugar content may be utilized.
3. Repeat blood glucose analysis.

BLS

1. Routine Medical Care.
2. If blood sugar is less than 60 mg/dL (or less than 80 mg/dL and exhibiting signs of hypoglycemia) and patient is conscious and able to swallow, administer **ORAL GLUCOSE**. Alternatively, beverages or food items high in simple sugar content may be utilized.
3. If blood sugar is less than 60 mg/dL (or less than 80 mg/dL and exhibiting signs of hypoglycemia) and patient is NOT conscious and able to swallow, administer **GLUCAGON** 2 mg IN (1/2 each nare). Or 1 mg IM for approved agencies.
4. Initiate advanced level intercept if patient remains altered or is not responsive to initial treatment. Do not delay transport.
5. Repeat blood glucose analysis.

ILS

1. Routine Medical Care.
2. If blood sugar is less than 60 mg/dL (or less than 80 mg/dL and exhibiting signs of hypoglycemia) and patient is conscious and able to swallow, administer **ORAL GLUCOSE**. Alternatively, juice or other beverages high in simple sugar content may be utilized.
3. If blood sugar is less than 60 mg/dL (or less than 80 mg/dL and exhibiting signs of hypoglycemia) and patient is NOT conscious or not able to swallow, establish IV and administer **D10W 500ml,** titrate to effect (run wide open until person reaches normal mentation). If unable to establish IV, **GLUCAGON** 2 mg IN (½ each nare) or 1 mg IM.
4. If patient initially presents with blood glucose level > 250 mg/dL or with signs of dehydration, administer 20 ml/kg **LACTATE RINGERS** bolus**.**
5. Repeat blood glucose analysis.
6. Continuous cardiac monitoring.

ALS

1. Routine Medical Care
2. If blood sugar is less than 60 mg/dL (or less than 80 mg/dL and exhibiting signs of hypoglycemia) and patient is conscious and able to swallow, administer **ORAL GLUCOSE**. Alternatively, juice or other beverages high in sugar content may be utilized.
3. If blood sugar is less than 60 mg/dL (or less than 80 mg/dL and exhibiting signs of hypoglycemia) and patient is NOT conscious or not able to swallow, establish IV and administer **D10W 500ml,** titrate to effect (run wide open until person reaches normal mentation). If unable to establish IV, **GLUCAGON** 2 mg IN (1/2 each nare) or 1 mg IM.
4. If patient initially presents with blood glucose level > 250 mg/dL or with signs of dehydration, administer 20 ml/kg **LACTATE RINGERS** bolus.
5. Repeat blood glucose analysis.
6. Continuous cardiac monitoring.

NOTES:

- Providers should also reference *Altered Level of Consciousness Protocol*.
- IO can be utilized in a diabetic emergency only after BOTH of the following have been met: at least 2 unsuccessful IV attempts AND glucagon has been administered with no improvement after 15 minutes.

Medical Care

STROKE/CVA

FAST Screen	
F	Face (droop)
A	Arms (drift, weakness)
S	Speech (slurred)
T	Time (last time seen normal)

VAN Screen – For LVO	**Positive VAN = Weakness + at least one of the following**
V	Visual Disturbance (field cut, double vision, blind new onset)
A	Aphasia (unable to speak, not understanding commands, mixed)
N	Neglect (forced gaze, inability to track to one side, unable to feel both sides at the same time, unable to identify own arm, ignoring one side)

If patient has a positive FAST and/or VAN exam notify the hospital of a "**STROKE ALERT: Positive FAST and/or VAN exam**"

FR/EMR

1. Routine Medical Care.
2. Protect paralyzed limbs from injury.
3. Position patient with head elevated 20 to 30 degrees unless systolic BP< 90 mmHg or trauma is present.

BLS

1. Routine Medical Care.
2. Protect paralyzed limbs from injury.
3. Provide an early notification to receiving hospital of a positive FAST exam or positive VAN screen.
4. Position patient with head elevated 20 to 30 degrees unless systolic BP< 90 mmHg or trauma is present.
5. Initiate advanced level intercept. Do not delay transport.

ILS

1. Routine Medical Care.
2. Protect paralyzed limbs from injury.
3. Provide an early notification to receiving hospital of a positive FAST exam or positive VAN screen.
4. Position patient with head elevated 20 to 30 degrees unless systolic BP< 90 mmHg or trauma is present.
5. Establish IV or lock. Draw blood tubes.
6. Continuous cardiac monitoring.
7. Establish 2nd IV if time allows.

ALS

1. Routine Medical Care.
2. Protect paralyzed limbs from injury.
3. Provide an early notification to receiving hospital of a positive FAST exam or positive VAN screen.
4. Position patient with head elevated 20 to 30 degrees unless systolic BP< 90 mmHg or trauma is present.
5. Establish IV or lock. Draw blood tubes.
6. Continuous cardiac monitoring.
7. Establish 2nd IV if time allows.

NOTES:

- Providers should also reference the *Altered Level of Consciousness Protocol.*
- Patient transport shall be initiated as soon as possible once the provider suspects the patient is having a CVA.
- Do not treat bradycardia with pacing/atropine if CVA is suspected.
- Leave initial FAST/VAN stroke worksheet at receiving facility.
- Patients shall be transported to a stroke center. See *Patient Destination* policy.

Medical Care

SEIZURES

FR/EMR

1. Routine Medical Care.

BLS

1. Routine Medical Care.

ILS

1. Routine Medical Care.
2. Establish saline lock or IV of **LACTATED RINGERS.**
3. Administer **MIDAZOLAM** 2 mg IV. If unable to establish an IV, administer intranasal, 4 mg (2 mg each nare) or 2mg IM.
4. Continuous cardiac monitoring.

ALS

1. Routine Medical Care.
2. Establish saline lock or IV of **LACTATED RINGERS.**
5. Administer **MIDAZOLAM** 2 mg IV/IO. If unable to establish an IV, administer **MIDAZOLAM** intranasal, 4 mg (2 mg each nare) or 2mg IM.
3. Continuous cardiac monitoring.

NOTES:

- Do not force anything between the teeth.
- Create safe surroundings for the patient (ensure patient's limbs and head do not strike other objects, remove moveable objects from around the patient, etc.). DO NOT RESTRAIN PATIENT.
- ALS: If definitive airway management is necessary and the patient has clenched teeth, consider RSI protocol.

Medical Care

SUSPECTED POISONING - ORGANOPHOSPHATE

FR/EMR

1. Routine Medical Care.

BLS

1. Routine Medical Care.
2. Transport as soon as possible after decontamination.

ILS

1. Routine Medical Care.
2. Establish 2 large-bore IVs with **LACTATED RINGERS.** Give boluses to maintain a systolic BP > 90 mmHg.
3. **ATROPINE** 2 mg IV/IO every 3-5 minutes to maintain pulse of at least 70 and systolic BP > 90 mmHg.
4. Continuous cardiac monitoring.
5. Transport as soon as possible after decontamination.

ALS

1. Routine Medical Care.
2. Establish 2 large-bore IVs with **LACTATED RINGERS.** Give boluses to maintain a systolic BP > 90 mmHg.
3. **ATROPINE** 2 mg IV/IO every 3-5 minutes to maintain pulse of at least 70 and systolic BP > 90 mmHg.
4. Continuous cardiac monitoring.
5. Transport as soon as possible after decontamination.

NOTES:

- Common organophosphates: insecticides (malathion, parathion, diazinon, ethion, etc.), herbicides (tribufos, merphos, etc.), nerve gases (sarin, soman, VX, etc.)
- Signs and symptoms of organophosphate poisoning can be remembered with the acronym SLUDGE: Salivation, Lacrimation, Urination, Defecation, Gastrointestinal upset, and Emesis.
- ENSURE APPROPRIATE DECONTAMINATION. Do not transport patients prior to decontamination, as an enclosed environment with a contaminated patient can be extremely dangerous to providers. NOTIFY THE RECEIVING FACILITY AS SOON AS POSSIBLE FOR ACTIVATION OF THEIR DECONTAMINATION TEAM. DO NOT ENTER THE FACILITY UNLESS SPECIFICALLY ORDERED TO DO SO.
- Consider calling for additional advanced units (for additional atropine) if prolonged patient contact time is anticipated.

Medical Care

SUSPECTED POISONING OR DRUG OVERDOSE

FR/EMR

1. Routine Medical Care.
2. Gather all medications/pill bottles, etc and give to transporting agency.
3. If patient is not breathing or not breathing adequately, assist with ventilations
4. If narcotic overdose is suspected AND respiratory depression/failure is present, administer NALOXONE 1 mg IN (½ each nare). Monitor for changes.
5. If no changes after 2-3 minutes, administer remaining **NALOXONE** 1 mg IN (½ each nare).

BLS

1. Routine Medical Care.
2. If patient is not breathing or not breathing adequately, assist with ventilations
3. If narcotic overdose is suspected AND respiratory depression/failure is present, administer **NALOXONE** 1 mg IN (½ each nare). Monitor for changes.
4. If no changes after 2-3 minutes, administer remaining **NALOXONE** 1 mg IN (½ each nare).
5. If no changes after first 2mg, repeat **NALOXONE** 2 mg IN (½ each nare).

ILS

1. Routine Medical Care.
2. Initiate IV or saline lock.
3. Continuous cardiac monitoring.
4. If narcotic overdose is suspected AND respiratory depression/failure is present, **NALOXONE** 0.4mg-2.0mg IV (titrate to return of adequate and spontaneous respirations). If IV cannot be established, then administer naloxone 2.0 mg via IM or IN (1/2 each nare).

ALS

1. Routine Medical Care.
2. Initiate IV or saline lock.
3. Continuous cardiac monitoring.
4. If narcotic overdose is suspected AND respiratory depression/failure is present, **NALOXONE** 0.4mg-2.0mg IV (titrate to return of adequate and spontaneous respirations). If IV cannot be established, then administer naloxone 2.0 mg via IM or IN (1/2 each nare).
5. If aspirin, tricyclic antidepressant, or digoxin overdose is suspected, administer **SODIUM BICARBONATE** 50 mEq IV.
6. If a beta blocker or Ca channel overdose is suspected and signs and symptoms present, administer **GLUCAGON,** 2 mg IN (½ each nare) or 1 mg IM with **MEDICAL CONTROL ORDER**
7. Place nasogastric tube and connect to low, continuous suctioning.

NOTES:

- Common tricyclic drugs include: Amitriptyline (Elavil), Imipraminoxide (Imiprex), Lofepramine (Lomont), Nortriptyline (Pamelor).
- Poison Control: 1-800-222-1222

Medical Care

SEPSIS

Indications:

- Patient above the age of 18

Miami Sepsis Score	
1	Body temp ≥ 38^{c} (100.4^{f}) or ≤ 35.5^{c} (96.0^{f})
1	Respiratory rate ≥ 22/minute
2	Shock Index ≥ 0.7 (Heart rate/Systolic BP)
	Composite Score

A **Sepsis Alert** should be called for the following:

- Miami Sepsis Score 3-4 with signs or history of an infection
- A positive Sepsis score and $ETCO_2$ less than 25 or SBP less than 90 point to higher severity of Sepsis

Protocol:

FR/EMR

1. *Routine Medical Care*.
2. Check blood glucose level.
3. Reassess patient and vital signs every 5 minutes.

BLS

1. *Routine Medical Care.*
2. Early notification to receiving facility of a "sepsis alert" if patient meet above criteria.
3. Reassess patient and vital signs every 5 minutes.
4. Initiate advanced level intercept.
5. Check blood glucose level.
6. Apply, obtain, and transmit 12-lead ECG.
7. If the temperature is ≥104.0^{o} F, place a cold pack in each armpit as well as the posterior neck. Remove the cold packs if shivering begins.

ILS

1. *Routine Medical Care.*
2. Early notification to receiving facility of a "sepsis alert" if patient meet above criteria.
3. Reassess patient and vital signs every 5 minutes.
4. Initiate at least 1 large bore IV.
5. Administer 500 ml **LACTATED RINGERS** bolus to obtain systolic blood pressure of at least 90 mmHg. May repeat boluses in rapid succession until target SBP is reached and pulmonary edema is not suspected.
6. Check blood glucose level.
7. Apply and obtain 12-lead ECG.
8. Once SBP >90mmHg, titrate lactated ringers rate to approximately 17 ml/min (1L/hr). Note time lactated ringers drip initiated.
9. Contact medical control early.

10. Verify all blood tubes drawn.
11. Establish 2nd large bore IV if time allows.
12. If the temperature is ≥104.0° F, place a cold pack in each armpit as well as the posterior neck. Remove the cold packs if shivering begins.

ALS

1. *Routine Medical Care.*
2. Early notification to receiving facility of a "sepsis alert" if patient meet above criteria.
3. Reassess patient and vital signs every 5 minutes.
4. Apply and obtain 12-lead ECG.
5. Initiate at least 1 large bore IV.
6. Administer 500 ml **LACTATED RINGERS** bolus to obtain systolic blood pressure of at least 90 mmHg. May repeat boluses in rapid succession until target SBP is reached and pulmonary edema is not suspected.
7. Check blood glucose level.
8. Consider Push dose **EPINEPHRINE – if transport less than 15 min to Medical Center**

Making push dose epinephrine

1. Take 1 saline flush 10ml, waste 1 ml of saline.
2. Draw up from Cardiac Epi 1; 10000 1ml into the 9ml saline flush, shake well.
3. The mixture now has 10 mL of epinephrine at 0.01 mg/mL (10 mcg/mL) concentration.
4. Use 1 ml (10 mcg) "pushes" IV to titrate to a systolic blood pressure > 90 mmHg.

9. If patient remains hypotensive, administer **LEVOPHED** infusion at 2mcg/min and titrate to SBP>90mmHg. Max dose of 12mcg/min

10. Once SBP >90mmHg, titrate lactated ringers rate to approximately 17 ml/min (1L/hr). Note time lactated ringers drip initiated.
11. Verify all blood tubes drawn.
12. Establish 2nd large bore IV if time allows.
13. If the temperature is ≥104.0° F, place a cold pack in each armpit as well as the posterior neck. Remove the cold packs if shivering begins.

NOTES:

- Sepsis is a life threatening condition. Providers must appreciate the critical nature of this condition.
- End tidal CO_2 readings <25 mmHg are can be correlated with increase lactic acid.
- No PO medications should be administered to any patient that is at high risk of aspiration or presents with nausea/vomiting.

Medical Care

ENVIRONMENTAL – NEAR DROWNING

FR/EMR

1. Routine Medical Care.

BLS

1. Routine Medical Care.
2. Remove wet clothing and dry patient.

ILS

1. Routine Medical Care.
2. Remove wet clothing and dry patient.
3. Initiate IV or lactated ringers lock.
4. Continuous cardiac monitoring.

ALS

1. Routine Medical Care.
2. Remove wet clothing and dry patient.
3. Initiate IV or lactated ringers lock.
4. Continuous cardiac monitoring.
5. If patient is unconscious, place nasogastric tube and connect to low, continuous suctioning.

Medical Care

ENVIRONMENTAL – RADIATION EXPOSURE

FR/EMR

1. Routine Medical Care.
2. Notify transporting unit of situation as soon as possible.

BLS

1. Routine Medical Care.
2. Notify receiving hospital as soon as possible. DO NOT ENTER RECEIVING FACILITY WITHOUT NOTIFYING OF SITUATION.

ILS & ALS

1. Routine Medical Care.
2. Do NOT initiate IV/IO unless absolutely necessary.
3. Notify receiving hospital as soon as possible. DO NOT ENTER RECEIVING FACILITY WITHOUT NOTIFYING OF SITUATION.

Medical Care

ENVIRONMENTAL – HYPOTHERMIA

FR/EMR & BLS

1. Routine Medical Care.
2. Protect from further heat loss.
3. Handle patient very gently.
4. Remove from cold environment (remove wet clothing, cover patient's head, cover patient with blankets).
5. Administer warm oxygen (use hot packs around oxygen tubing).
6. Place hot packs on central pulse points (axillary, femoral).

ILS & ALS

1. Routine Medical Care.
2. Protect from further heat loss.
3. Handle patient very gently.
4. Remove from cold environment (remove wet clothing, cover patient's head, cover patient with blankets).
5. Administer warm oxygen (use hot packs around oxygen tubing).
6. Continuous cardiac monitoring.
7. Place hot packs on central pulse points (axillary, femoral).
8. Establish IV and administer warmed **LACTATED RINGERS** 500 ml bolus

NOTES: Covered hot packs can be wrapped around IV tubing to heat fluids.

Medical Care

ENVIRONMENTAL – FROSTBITE

FR/EMR & BLS

1. Routine Medical Care.
2. Remove clothing covering affected area. Do not forcefully remove clothing that sticks to affected area.
3. Cover affected area with dry sterile dressing and splint.
4. Protect area from re-freezing.

ILS & ALS

1. Routine Medical Care.
2. Remove clothing covering affected area. Do not forcefully remove clothing that sticks to affected area.
3. Cover affected area with dry sterile dressing and splint.
4. Protect area from re-freezing.
5. Consider initiating *Pain Control* Protocol.

Medical Care

ENVIRONMENTAL – HEAT RELATED EMERGENCIES – CRAMPS, TETANY, SYNCOPE, EXHAUSTION, HEAT STROKE

FR/EMR

1. Routine Medical Care.
2. Move to cool environment.
3. Cool patient (place cold packs on central pulse points).
4. Do not massage cramping muscle.
5. If heat stroke is not suspected and patient is not nauseated, give 1-2 glasses of electrolyte containing solution (i.e. Gatorade), if available.

BLS

1. Routine Medical Care.
2. Move to cool environment.
3. Cool patient (place cold packs on central pulse points).
4. Do not massage cramping muscle.
5. Perform 12-lead ECG and transmit to receiving facility.
6. If heat stroke is not suspected and patient is not nauseated, give 1-2 glasses of electrolyte containing solution (i.e. Gatorade), if available.

ILS & ALS

1. Routine Medical Care.
2. Move to cool environment.
3. Cool patient (place cold packs on central pulse points).
4. Do not massage cramping muscle.
5. If heat stroke is not suspected and patient is not nauseated, give 1-2 glasses of electrolyte containing solution (i.e. Gatorade), if available.
6. Continuous cardiac monitoring.
7. Initiate IV TKO of **LACTATED RINGERS**. Give 500 ml bolus if patient is hypotensive.

Medical Care

ENVIRONMENTAL – BITES AND ENVENOMATIONS

FR/EMR

1. Routine Medical Care.
2. Position patient supine.
3. Immobilize affected area/limb.
4. Monitor for allergic reaction.

BLS

1. Routine Medical Care.
2. Position patient supine.
3. Immobilize affected area/limb.
4. Monitor for allergic reaction.
5. Obtain 12-Lead ECG.

ILS & ALS

1. Routine Medical Care.
2. Position patient supine.
3. Immobilize affected area/limb.
4. Monitor for allergic reaction.
5. Continuous cardiac monitoring.
6. Consider initiating *Pain Control* Protocol.

NOTES:

- Do not attempt to suction out poison from the injection site.

Trauma Care

ROUTINE TRAUMA CARE

FR/EMR

1. Perform scene survey (assess for hazards, number of patients, mechanism of injury, special extrication needs, etc.).
2. Consider spinal precautions if mechanism warrants (refer to *Spinal Immobilization* Procedure*)*.
3. Assess level of consciousness.
4. Establish/confirm airway patency.
5. Assess breathing and circulation.
6. Obtain pulse oximetry reading.
7. Administer supplemental **OXYGEN** per *Oxygen Administration* Procedure.
8. Identify and treat life threatening conditions.
9. Perform rapid trauma assessment.
10. Continually reassess patient until transport service arrives.

BLS

1. Perform scene survey (assess for hazards, number of patients, mechanism of injury, special extrication needs, etc.).
2. Consider spinal precautions if mechanism warrants (refer to *Spinal Immobilization* Procedure*)*.
3. Assess level of consciousness.
4. Establish/confirm airway patency.
5. Assess breathing and circulation.
6. Obtain pulse oximetry reading.
7. Administer supplemental **OXYGEN** per *Oxygen Administration* Procedure.
8. Identify and treat life threatening conditions.
9. Perform rapid trauma assessment.
10. If patient meets "load and go" criteria, transport as soon as possible (see *Load and Go* Protocol). Ensure advanced level intercept is activated if patient condition or mechanism warrants.
11. Manage non-life threatening injuries (if patient is unstable, do this while enroute and as time allows)
12. Take vital signs every 5 minutes (unstable) or 15 minutes (stable). Ensure a blood glucose measure is performed.
13. Perform 12-lead ECG (unstable or significant mechanism of injury).
14. Perform secondary trauma survey if time and patient condition allows.

ILS

1. Perform scene survey (assess for hazards, number of patients, mechanism of injury, special extrication needs, etc.).
2. Consider spinal precautions if mechanism warrants (refer to *Spinal Immobilization* Procedure*)*.
3. Assess level of consciousness.
4. Establish/confirm airway patency.
5. Assess breathing and circulation.
6. Obtain pulse oximetry reading.
7. Administer supplemental **OXYGEN** per *Oxygen Administration* Procedure.
8. Identify and treat life threatening conditions.
9. Perform rapid trauma assessment.

10. If patient meets "load and go" criteria, transport as soon as possible (see *Load and Go* Protocol). Ensure advanced level intercept is activated if patient condition or mechanism warrants.
11. Manage non-life threatening injuries (if patient is unstable or mechanism warrants, all interventions shall be performed enroute).
12. Establish IV access.
    a. If patient is unstable, establish two large-bore IVs and administer 500 ml **LACTATED RINGERS** boluses, titrate to maintain a systolic blood pressure of 80 mmHg. Repeat 500ml bolus as needed to maintain systolic blood pressure. IO should be used in these patients if first attempt at IV access is unsuccessful.
    b. If patient is stable, but a significant mechanism of injury is present, establish IV access.
    c. If patient is stable and a low mechanism of injury is present, IV access may be established.
13. Take vital signs every 5 minutes (unstable) or 15 minutes (stable). Ensure a blood glucose measure is performed.
14. Perform 12-lead ECG and continuous cardiac monitoring (unstable, significant mechanism of injury, or trauma-induced chest pain).
15. Consider initiating *Pain Control* Protocol.
16. Perform secondary trauma survey if time and patient condition allows.

ALS

1. Perform scene survey (assess for hazards, number of patients, mechanism of injury, special extrication needs, etc.).
2. Consider spinal precautions if mechanism warrants (refer to *Spinal Immobilization Procedure)*.
3. Assess level of consciousness.
4. Establish/confirm airway patency.
5. Assess breathing and circulation.
6. Obtain pulse oximetry reading.
7. Administer supplemental **OXYGEN** per *Oxygen Administration* Procedure.
8. Identify and treat life threatening conditions.
9. Perform rapid trauma assessment.
10. If patient meets "load and go" criteria, transport as soon as possible (see *Load and Go* Protocol).
11. Manage non-life threatening injuries (if patient is unstable or mechanism warrants, all interventions shall be performed enroute).
12. Establish IV access.
    a. If patient is unstable, establish two large-bore IVs and administer 500 ml **LACTATED RINGERS** boluses (total), titrate to maintain a systolic blood pressure of 80 mmHg. Repeat 500ml bolus as needed to maintain systolic blood pressure. IO should be used in these patients if first attempt at IV access is unsuccessful.
    b. If patient is stable, but a significant mechanism of injury is present, establish IV access.
    c. If patient is stable and a low mechanism of injury is present, IV access may be established.
13. Take vital signs every 5 minutes (unstable) or 15 minutes (stable). Ensure a blood glucose measure is performed.
14. Perform 12-lead ECG and continuous cardiac monitoring (unstable, significant mechanism of injury, or trauma-induced chest pain).
15. Consider initiating *Pain Control* Protocol.
16. **For unstable trauma patients needing pain control (low BP, etc.), 0.3 mg/Kg Ketamine IV for pain control**
17. Perform secondary trauma survey if time and patient condition allows.

Notes:

- Consider application of system approved Pelvic binder for pelvic fractures

OSF HEALTHCARE
Saint James John W Albrecht Medical Center

Trauma Care

CRITICAL TRAUMA SITUATIONS – "LOAD & GO" & "Trauma Alerts"

FR/EMR

1. Routine Trauma Care.

BLS, ILS, ALS

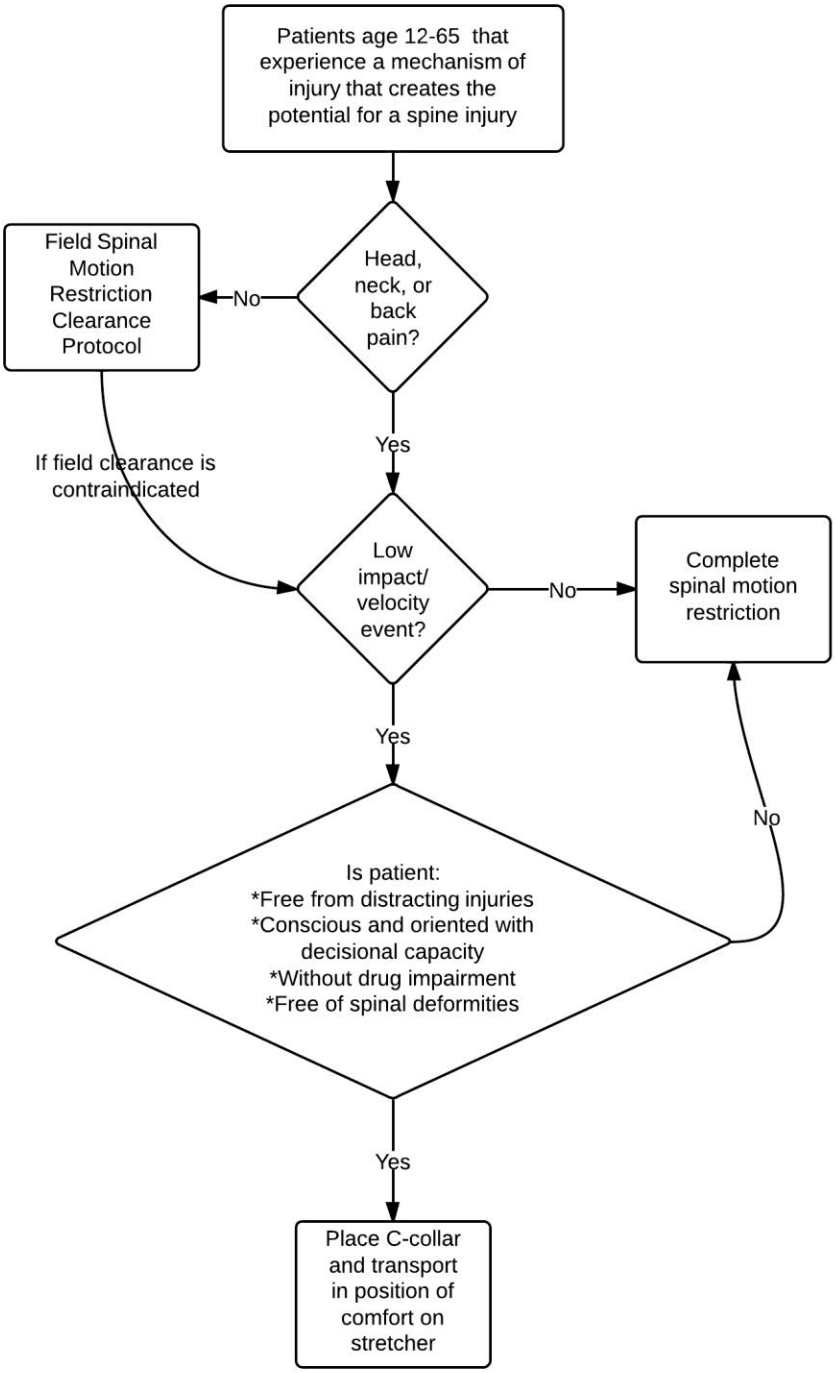
1. Routine Trauma Care.
2. Transport should be initiated as soon as possible.
3. DO NOT DELAY TRANSPORT WAITING FOR INTERCEPT. INTERCEPT SHOULD BE PERFORMED ENROUTE TO HOSPITAL.
4. If the patient has one of the following conditions below, notify the receiving hospital of a "**TRAUMA ALERT**":
    a. Penetrating Trauma to the head, neck or torso
    b. Patient is hemodynamically unstable (Systolic BP under 90 for an adult of Systolic under 80 for a pediatric) on two consecutive measurements of 5 minutes apart
    c. Application of a tourniquet by EMS provider
    d. Multiple long bone fractures
5. If a trauma does not meet above criteria, but there is concern about patient's condition, you may still call early and relay findings to hospitals and allow them to make decisions in regard to whether a Trauma Alert should be made or not.

Below is a list of conditions in which you should limit scene time

6. The following are critical situations (not an all inclusive list) that require LOAD & GO transport:
    a. Head injury with unconsciousness, unequal pupils. Or decreasing level of consciousness (GCS≤10)
    b. Airway obstruction that cannot be quickly relieved by mechanical methods such as suction or positioning
    c. Conditions resulting in possible inadequate breathing
        i. Large open chest wound
        ii. Large flail chest
        iii. Tension pneumothorax
        iv. Major blunt chest injury
    d. Penetrating traumatic cardiopulmonary arrest
    e. Penetrating trauma to the head, neck or torso
    f. Shock (Hemodynamically unstable, B/P <70 SBP or HR > 120
    g. Signs of conditions that may rapidly lead to shock:
        i. Tender, distended abdomen
        ii. Pelvic instability
        iii. Bilateral femur fractures
    h. Application of a tourniquet by an EMS provider

Trauma Care

SMR DECISION TREE



Trauma Care

TRAUMATIC CARDIOPULMONARY ARREST

FR/EMR

1. Routine Trauma Care.
2. Refer to *Cardiac Arrest Protocol* as applicable.

BLS, ILS, ALS

1. Routine Trauma Care.
2. If the cause of traumatic cardiopulmonary arrest is blunt force AND AED indicates "no shock advised," or asystole is noted by advance provider contact **MEDICAL CONTROL** for death declaration.
3. Refer to *Cardiac Arrest* Protocol as applicable.

Trauma Care

HEAD INJURY

FR/EMR

1. Routine Trauma Care.

BLS, ILS, ALS

1. Routine Trauma Care.
2. If signs of increased intracranial pressure, consider hyperventilating patient. See *Assisted Ventilations* Procedure below.

Assisted Ventilations

1. Hyperventilation should not be routinely used on patients
2. This is for use in patients with signs of herniation (blown pupil, posturing, bradycardia, decreasing GCS). GCS should be less than 8 or the patient unresponsive
3. If signs above are noted, ventilate between 14-18/minute to maintain EtCO2 between 30-35 mmhg (if capnography is available).

Trauma Care

SPINAL INJURY

FR/EMR, BLS, ILS

1. Routine Trauma Care.

ALS

1. Routine Trauma Care.
2. Consider Push dose **EPINEPHRINE – if transport less than 15 min to Medical Center**

Making push dose epinephrine

1. Take 1 saline flush 10ml, waste 1 ml of saline.
2. Draw up from Cardiac Epi 1; 10000 1ml into the 9ml saline flush, shake well.
3. The mixture now has 10 mL of epinephrine at 0.01 mg/mL (10 mcg/mL) concentration.
4. Use 1 ml (10 mcg) “pushes” IV to titrate to a systolic blood pressure > 90 mmHg.

3. If neurogenic shock is suspected and patient is not responsive to fluid bolus, **LEVOPHED** infusion at 2mcg/min and titrate to SBP>90mmHg. Max dose of 12mcg/min

Trauma Care

THERMAL/ELECTRICAL BURNS

FR/EMR & BLS

1. Have patient removed from fire/remove fire from patient.
2. Routine Trauma Care.
3. Stop the burning process
    a. If burn occurred within 15 minutes, cover burns with dry, clean/sterile dressing and cool with sterile water.
    b. If burn occurred greater than 15 minutes prior, apply dry, clean/sterile dressings.
4. Remove patient's clothing/jewelry from affected area. If clothing sticks, do not remove.

ILS & ALS

1. Have patient removed from fire/remove fire from patient.
2. Routine Trauma Care.
3. Stop the burning process
    a. If burn occurred within 15 minutes, cover burns with dry, clean/sterile dressing and cool with sterile water.
    b. If burn occurred greater than 15 minutes prior, apply dry, clean/sterile dressings.
4. Remove patient's clothing/jewelry from affected area. If clothing sticks, do not remove.
5. Administer 500ml bolus of **LACTATED RINGERS**. Repeat to maintain B/P
6. Initiate *Pain Control Protocol*.

NOTES:

- Avoid administering medications via intranasal route.

Trauma Care

CHEMICAL BURNS

FR/EMR

1. Routine Trauma Care.
2. Note chemical agent causing burn.
3. Wearing protective equipment, remove patient's clothing and jewelry. Contaminated clothing may cause continued exposure.
4. Irrigate or flush burn with copious amounts of water or saline, unless contraindicated.
    a. Dry powder burns should be brushed off before applying water
    b. Irrigate burns to the eye(s) for at least 15 minutes
    c. Alkaline burns should receive continuous irrigation

BLS

1. Routine Trauma Care.
2. Note chemical agent causing burn.
3. Wearing protective equipment, remove patient's clothing and jewelry. Contaminated clothing may cause continued exposure.
4. Irrigate or flush burn with copious amounts of water or saline, unless contraindicated.
    a. Dry powder burns should be brushed off before applying water
    b. Irrigate burns to the eye(s) for at least 15 minutes
    c. Alkaline burns should receive continuous irrigation
5. Ensure receiving hospital is notified of potential chemical exposure.

ILS & ALS

1. Routine Trauma Care.
2. Note chemical agent causing burn.
3. Wearing protective equipment, remove patient's clothing and jewelry. Contaminated clothing may cause continued exposure.
4. Irrigate or flush burn with copious amounts of water or saline, unless contraindicated.
    a. Dry powder burns should be brushed off before applying water
    b. Irrigate burns to the eye(s) for at least 15 minutes
    c. Alkaline burns should receive continuous irrigation
5. Ensure receiving hospital is notified of potential chemical exposure.
6. Initiate *Pain Control* Protocol.

NOTES:

- If time and patient condition allows, a Materials Safety Data Sheet (MSDS), Safety Data Sheet (SDS), Product Safety Data Sheet (PSDS), or equivalent should be obtained.
- Do not transport patients prior to appropriate decontamination efforts by trained hazardous materials responders.

Trauma Care

EXTREMITY INJURIES/AMPUTATED TISSUE

FR/EMR, BLS, ILS & ALS

1. Routine Trauma Care.
2. Extremity care:
    a. Check and record distal pulses, sensation, movement, tenderness, instability, crepitus (before and after splinting).
    b. Rest, ice, compression (elastic bandage) elevation, splint
    c. If extremity is severely angulated and pulses are absent, apply gentle traction to attempt to straighten it, then splint (if resistance is encountered, splint extremity in position found)
    d. DO NOT intentionally replace any protruding bone.
3. Amputation care:
    a. Control bleeding
    b. If tissue is partially amputated, NEVER COMPLETE THE AMPUTATION
    c. Attempt to recover the amputated part; collect all tissue, bone fragments, etc. Do not delay patient transport while attempting to recover amputated part.
    d. Apply wet sterile dressing to stump area
    e. Apply hemorrhage control agent (i.e. Quik-Clot)
    f. For uncontrolled hemorrhage of an extremity, apply EMS system approved tourniquet
4. Care of amputated part:
    a. Wrap in moist (saline) dressing. Do not immerse.
    b. Place part in waterproof bag or container and seal.
    c. Place the container in a second container filled with ice
    d. If possible, transport amputated part is transported with patient.
5. As appropriate, initiate *Pain Control* Protocol.

NOTES:

- Consider application of system approved Pelvic binder for pelvic fractures
- Consider wound packing for open wounds to the truck or pelvis
- **For unstable trauma patients needing pain control (low BP, etc.), 0.3 mg/Kg Ketamine IV for pain control**

Trauma Care

HEMORRHAGIC SHOCK

FR/EMR, BLS, ILS

1. Routine Trauma Care.

ALS

1. Routine Trauma Care.
2. If patient remains hemodynamically unstable (SBP <80 mmHg) after bleeding control attempts and one fluid bolus of 500 ml, administer **TRANEXAMIC ACID** (TXA) 1 gm over 10 minutes. Use infusion pump.
3. Additional lactated ringer boluses may be necessary (reference *Routine Trauma Care* Protocol).
4. Notify receiving hospital of TXA administration.

NOTES:

- TXA cannot be administered if trauma occurred more than 4 hours prior.
- Do not run TXA wide-open.
- TXA can be utilized in suspected GI Bleed, Vaginal Bleed or Postpartum Hemorrhage with signs of shock (tachycardia and/or hypovolemia, altered mental status)

Trauma Care

CRUSH/SUSPENSION

FR/EMR

1. Routine Trauma Care.
2. If an extremity is involved, place EMS system approved tourniquet on affected extremity as close to crush area as possible.

BLS & ILS

1. Routine Trauma Care.
2. If an extremity is involved, place EMS system approved tourniquet on affected extremity as close to crush area as possible.

PRIOR TO RELEASE OF COMPRESSION/SUSPENSION FORCE

3. Nebulized **ALBUTEROL SULFATE**. Repeat once. (Do NOT administer ipratropium unless otherwise indicated)

ALS

1. Routine Trauma Care.
2. If an extremity is involved, place EMS system approved tourniquet on affected extremity as close to crush area as possible.
3. Administer 1000 mL **NORMAL SALINE** bolus.
4. In addition to **NORMAL SALINE** bolus, **SODIUM BICARBONATE**. Mix 50 mEq in 1000 mL of **NORMAL SALINE**. Administer the entire 1000 mL bolus at wide open rate (using 10gtts tubing).

PRIOR TO RELEASE OF COMPRESSION/SUSPENSION FORCE

5. Nebulized **ALBUTEROL SULFATE**. Repeat once. (Do NOT administer ipratropium unless otherwise indicated)

NOTES:

- Rescue of victims is paramount in suspension situations.

General Protocols

PAIN CONTROL

FR/EMR

1. Routine Trauma, Medical, and/or Cardiac Care.

BLS

1. Routine Trauma, Medical, and/or Cardiac care.
2. Administer 500mg of **Acetaminophen** by mouth for minor to moderate pain
3. Consider **ONDANSETRON** 4mg ODT for nausea.

ILS

1. Routine Trauma, Medical, and/or Cardiac care
2. Pain medication may be given without calling medical control if systolic blood pressure is greater than 90 mmHg. If systolic blood pressure is less than 90 mmHg, pain is described as "headache" in nature, head injury is present, CVA is suspected, OR if patient has any reported or observed diminished mentation, Contact **MEDICAL CONTROL** prior to administering pain control.
3. Administer 500mg of **Acetaminophen** by mouth for minor to moderate pain
4. For pain moderate to extreme pain, **FENTANYL** 1 mcg/kg IV/IM/IN (max single dose of 100mcg) Dose should be decreased by ½ if patient has a history of renal disease.
5. After administration of fentanyl, consider **ONDANSETRON** 4 mg IV/IN/ODT for prophylactic treatment of nausea.
6. For continued pain after 10 minutes, **FENTANYL** 1mcg/kg IV/IM/IN (max 50mcg for repeat dose).
7. May be repeated after another 10 minutes 1mcg/kg (max 50mcg for repeat dose, max of 200mcg total).

ALS

1. Routine Trauma, Medical, and/or Cardiac care.
2. Pain medication may be given without calling medical control if systolic blood pressure is greater than 90 mmHg. If systolic blood pressure is less than 90 mmHg, pain is described as "headache" in nature, head injury is present, CVA is suspected, OR if patient has any reported or observed diminished mentation, Contact **MEDICAL CONTROL** prior to administering pain control.
3. Administer 500mg of **Acetaminophen** by mouth for minor to moderate pain
4. For pain moderate to extreme pain, **FENTANYL** 1 mcg/kg IV/IM/IN (max single dose of 100mcg) Dose should be decreased by ½ if patient has a history of renal disease.
5. After administration of fentanyl, consider **ONDANSETRON** 4 mg IV/IN/ODT for prophylactic treatment of nausea.
6. For continued pain after 10 minutes, **FENTANYL** 1mcg/kg IV/IM/IN (max 50mcg for repeat dose).
7. May be repeated after another 10 minutes 1mcg/kg (max 50mcg for repeat dose, max of 200mcg total).

8. For continued pain and if maximum Fentanyl dose has been administered, administer 0.5mg/kg of **KETAMINE** IV/IO infused in a 100ml bag of Normal Saline over 15 minutes with **MEDICAL CONTROL** orders.

NOTES:

- If patient is allergic to a medication in the pain control protocol, do not administer that medication.
- Overall goal of pain management is for the patient to be tolerable or as close to pain free. If you administer the maximum dosage of medications under this protocol, contact medical control for further orders.
- **Closely monitor patient's respiratory status. Continuous SpO2, cardiac monitoring, and capnography (if available) is required on patients receiving pain control.**
- Acetaminophen is for minor to moderate pain.
- **For unstable trauma patients needing pain control (low BP, etc.), 0.3 mg/Kg Ketamine IV for pain control**

General Protocols

NAUSEA/VOMITING

FR/EMR

1. Routine Trauma, Medical, and/or Cardiac Care.
2. Prevent risk of aspiration by placing patient in left lateral recumbent position or slightly tilting backboard (if full SMR instituted).

BLS

1. Routine Trauma, Medical, and/or Cardiac Care.
2. Prevent risk of aspiration by placing patient in left lateral recumbent position or slightly tilting backboard (if full SMR instituted).
3. **ONDANSETRON** 4mg ODT.

ILS

1. Routine Trauma, Medical, and/or Cardiac Care.
2. Prevent risk of aspiration by placing patient in left lateral recumbent position or slightly tilting backboard (if full SMR is instituted).
3. Establish IV.
4. **ONDANSETRON** 4mg IV or ODT. If unable to establish IV, ondansetron may be administered IN (2 mg each nare). Ondansetron may be repeated once in 10 minutes if patient remains nauseous/vomiting.

ALS

1. Routine Trauma, Medical, and/or Cardiac Care.
2. Prevent risk of aspiration by placing patient in left lateral recumbent position or slightly tilting backboard (if full SMR is instituted. Also consider placing nasogastric tube with low continuous suctioning).
3. Establish IV.
4. **ONDANSETRON** 4mg IV or ODT. If unable to establish IV, ondansetron may be administered IN (2 mg each nare). Ondansetron may be repeated once in 10 minutes if patient remains nauseous/vomiting.

NOTES:

- Keep suction ready

General Protocols

CHEMICAL RESTRAINT

FR/EMR

1. Routine Medical Care.
2. Work with law enforcement to safely restrain patient, if necessary. Refer to *Patient Restraint* procedure.

BLS

1. Routine Medical Care.
2. Work with law enforcement to safely restrain patient, if necessary. Refer to *Patient Restraint* procedure.

ILS

1. Routine Medical Care.
2. Work with law enforcement to safely restrain patient, if necessary. Refer to *Patient Restraint* procedure.
3. Administer **versed**, 2mg IV/IM/IN (1 mg each nare).
4. Continuous cardiac monitoring, pulse oximetry, and waveform capnography (if available) must be initiated once patient's demeanor allows.
5. Contact **MEDICAL CONTROL** as soon as possible.

ALS

1. Routine Medical Care.
2. Work with law enforcement to safely restrain patient, if necessary. Refer to *Patient Restraint* procedure.
3. Administer **Haloperidol, 5mg IM and Midazolam (Versed): 2mg IM**. May repeat if needed after 10 minutes if patient is not manageable.
4. If severe combativeness, administer **KETAMINE**, 4 mg/kg IM. If patient is exhibiting signs of Excited Delirium (extreme agitation, delirium, hyperthermia, acute onset) administer **KETAMINE** as first line medication (use above listed doses).
5. Continuous cardiac monitoring, pulse oximetry, and waveform capnography (if available) must be initiated once patient's demeanor allows.
6. Contact **MEDICAL CONTROL** as soon as possible.

Critical Thinking Elements

- Document the patient's behavior, statements, actions and surroundings.
- Verbally attempt to calm and/or re-orient the patient to reality.

- If restraints are used, thoroughly document the reasons for applying restraints, time of application, condition of the patient before and after application, method of restraint and any law enforcement involvement, including any use of law enforcement equipment (e.g. handcuffs) and the time Medical Control was contacted.
- Consider medical etiologies of apparent behavioral disorders such as hypoxia, stroke/head bleed, substance abuse/overdose, and hypoglycemia.
- Document response to sedation including vital signs, Rhythm, Pulse Ox and ETCO2.
- Haldol may precipitate dystonic reactions including Restlessness, Tics, and Muscle Rigidity. If suspected, give Benadryl 25mg IV or IM.
- When using Ketamine, be aware of Side Effects Laryngospasm: this very rare adverse reaction presents with stridor and respiratory distress. After every administration of ketamine:
  a. Prepare to provide respiratory support including bag-valve-mask ventilation and suction which are generally sufficient in rare cases of laryngospasm.
  b. Institute cardiac monitoring, pulse oximetry and continuous waveform capnography
  c. Establish IV or IO access, check blood glucose
  d. Establish and maintain physical restraint.

- Emergence reaction: presents as anxiety, agitation, apparent hallucinations or nightmares as ketamine is wearing off. For severe reactions, consider Versed 2mg IM or IV. Nausea and Vomiting: always have suction available after ketamine administration. Hypersalivation: Suction usually sufficient.

General Protocols

RAPID SEQUENCE INTUBATION

FR/EMR, BLS, ILS

1. N/A

ALS

1. PRE-OXYGENATE: Position the patent and pre-oxygenate with high flow oxygen by mask for 2-5 minutes. Do not manually ventilate the patient unless ventilatory assistance is needed; if so, use BVM to provide respiratory support.
2. PREPARE: Assess for difficult airway and likelihood of difficulty with bag and mask ventilation. Have airway adjuncts and alternative airway readily available. If you anticipate difficulty with intubation or bag and mask ventilation call for help early and have a primary and secondary plan for airway management consider using video laryngoscopy initially. Assemble the required equipment and draw up the medications in labeled syringes. Ensure that the IV functions well. Continuously monitor the cardiac rhythm and pulse oximetry if conditions allow. Have immediately available an iGel or BIAD, and the emergency cricothyrotomy kit. **RSI requires the use of a video laryngoscope**
3. PRE-MEDICATION:

a.) Fentanyl1-3 mcg/kg IV slowly over several minutes

b.) Sedation: May use any of the following:

Midazolam 0.1 mg/kg IV

Ketamine 1-2 mg/kg IV preferred agent for status asthmaticus

Etomidate 0.2-0.4 mg/kg (good for increased ICP, has minimal CV effect.)

NOTE:

- Continue pre-oxygenation for 2-3 minutes (allows medications to work) prior to Step 4, if time allows and the patient has effective respiratory effort/support.
- Consider removing the C-collar if present while providing in-line manual immobilization of the head and neck to aid intubation, also consider using video laryngoscopy as a first line in these patients.

4. PARALYZE, then INTUBATE

Paralytic medications:

a. Succinylcholine (Anectine) 1.5-2mg/kg IV

*i. Succinylcholine **contraindications** include:*

1. *5 days or more post-burn or major trauma*
2. *Patient with a history of chronic paralysis, malignant hyperthermia, know* Acetylcholinesterase *deficiency, or neuromuscular disorder (i.e. MS)*

3. *Known hyperkalemia*

b. Rocuronium (Zemuron) 1 mg/kg IV

i. Preferred agent for pediatric intubations unless known or predicted difficult airway

ii. Preferred agent if known or suspected contraindications to Succinylcholine

NOTE:

- Apnea, jaw relaxation, and decreased resistance to bag/mask ventilations indicate that the patient is sufficiently relaxed to proceed with intubation.
- Intubate, check tube placement, secure tube, and continue to assist respirations.

5. For CONTINUED NEUROMUSCULAR BLOCKADE after intubation, administer:

c. Rocuronium (Zemuron) 0.5-1.0 mg/kg IVP

For CONTINUED SEDATION, administer:

a) Midazolam (Versed) 0.05mg/kg (3-5 mg in adults) every 15-30 minutes prn after intubation

b) Fentanyl 1-3 mcg/kg IV over 2 minutes

c) Ketamine 0.5-1.5 mg/kg every 5-10 minutes

6. UNSUCCESSFUL PLACEMENT:

If endotracheal intubation is unsuccessful, and you are unable to ventilate the patient with BVM, consider attempting to gain airway control using one of the following techniques: (Refer to the Advanced Procedure Manual: Airway Procedures: Failed Airway Algorhythm (510.010))

a) Place iGel

b) Attempt placing bougie through iGel, and exchanging for ETT (only if iGel ineffective)

c) Consider quick trach procedure if absolutely necessary.

NOTE: If intubation is unsuccessful and additional paralytics are needed, a non-depolarizing agent should be considered after ease of bagging and airway back up has been carefully considered.

RSI requires the use of a video laryngoscope.

General Protocols

FIELD SPINAL MOTION RESTRICTION PROTOCOL

Indications:
Any patient that experiences a mechanism of injury that creates the potential for a spine injury.

Contraindications:
Any patient less than 12 years old or any patient 65 years old or greater, patients with chronic neck or back pain, any patient exhibiting signs of shock.

Protocol:
All patients will be assessed by the following criteria. Only those patients who meet ALL requirements as NO or NORMAL may be cleared.

1. Does the patient have a GCS less than 15?
2. Does the patient complain of neck or back pain?
3. Is there tenderness, swelling or deformity noted when the complete spine is palpated?
4. Is there a distracting injury or distracting pain?
5. Are there signs/symptoms of alcohol or drug abuse present?

Spinal motion restriction (SMR) may be withheld only if the answer to all of the five preceding questions is NO. If the answer to any of the preceding questions is yes the patient should be placed in full SMR. If the patient meets the criteria to withhold SMR, EMS providers may still elect to provide SMR.

Examples of distracting injuries: long bone fractures, rib fractures, pelvic fractures, abdominal pain, large contusion, avulsion to the face or scalp, partial thickness burns greater than 10% TBSA or full thickness burns, any significantly painful injury.

Examples of signs/symptoms of alcohol or drug abuse: GCS less than 15, slurred speech, dilated pupils, flushed skin, unsteady gate, irregular behavior, presence of paraphernalia.

OSF HEALTHCARE
Saint James John W Albrecht Medical Center

General Protocols

INDUCED HYPOTHERMIA

FR/EMR & BLS

4. *Cardiopulmonary Arrest* Protocol.
5. Insert and confirm placement of blind insertion airway device.
6. Ventilate the patient with BVM and 100% oxygen.
7. Confirm return of spontaneous pulse.
8. Confirm history (non-traumatic – drowning and hanging are permissible)
9. Confirm patient age is 18 years or greater.
10. Perform neurological exam.
11. Expose patient, apply ice packs around head, to the groin, and axilla areas.

ILS & ALS

1. *Cardiopulmonary Arrest* Protocol.
2. Insert and confirm placement of blind insertion airway device or ET Tube.
3. Ventilate the patient with BVM and 100% oxygen.
4. Confirm return of spontaneous pulse.
5. Confirm history (non-traumatic – drowning and hanging are permissible)
6. Confirm patient age is 18 years or greater.
7. Perform neurological exam.
8. Expose patient, apply ice packs around head, to the groin, and axilla areas.
9. Reassess temperature. If <33° C rectally, discontinue cooling process. If >33° C rectally and no shivering, continue to monitor temperature and cooling process.

NOTES:

- ROSC is defined as the return of a palpable pulse of greater than 30 seconds
- Induced hypothermia should only be initiated after ROSC has been achieved and the patient has no meaningful response to verbal commands
- Temperature after the resuscitation must be greater than 33 C rectally.
- **If no blind insertion airway or intubation is in place, cooling may only be initiated by Medical Control order**
- Protect the patient's modesty; undergarments may remain in place during cooling efforts
- Do not delay transport to cool the patient
- Frequently monitor the airway and temperature status
- Patients may develop metabolic alkalosis with cooling; **DO NOT HYPERVENTILATE**
- **Chilled Saline is no longer recommended and should not be used without a MEDICAL CONTROL ORDER**

OB/GYN

PRE-ECLAMPSIA, ECLAMPSIA, TOXEMIA

FR/EMR, BLS, ILS

1. Assure an airway and ventilate as needed.
2. Routine Medical Care.
3. Assure minimal stimulation (handle gently, do not check pupil reaction with light).
4. If patient is having seizures, follow *Seizures* protocol.

ALS

1. Assure an airway and ventilate as needed.
2. Routine Medical Care.
3. Assure minimal stimulation (handle gently, do not check pupil reaction with light).
4. If patient is having seizures, follow *Seizures* protocol.
5. **MAGNESIUM SULFATE**, 2-4 g SLOW IV (rate not to exceed 1gram/minute). Do not lower BP to less than 130/80.

NOTES:

- Definition: Coma and convulsive seizures or SBP greater than 140, diastolic greater than 90, occurring between the 20th week of pregnancy and the end of the first week postpartum.
- Calcium chloride is useful for magnesium sulfate overdose

OB/GYN

IMPENDING DELIVERY

FR/EMR, BLS

1. Routine Medical Care.
2. Obtain a complete history
3. Position patient on left side if 2nd or 3rd trimester. Elevate feet 10-12 inches if hypotensive.

ILS & ALS

1. Routine Medical Care.
2. Obtain a complete history
3. Position patient on left side if 2nd or 3rd trimester. Elevate feet 10-12 inches if hypotensive.
4. If hypotensive, give 250 ml normal lactated ringers
5. Monitor ECG, if indicated

NOTES:

- History questions: length of gestation, previous pregnancies (gravida), # of children from previous pregnancies (para), due date, history of complications of pregnancy, pain level, contraction status/frequency, membrane status, anticipated multiple birth, estimate bleeding, high risk factors.
- High risk factors: lack of prenatal care, drug abuse, teenage pregnancy, history of diabetes, hypertension, cardiac diseases, previous breech or c-section deliveries, pre-eclampsia/eclampsia/toxemia

OB/GYN

CHILDBIRTH: NORMAL DELIVERY

FR/EMR & BLS

1. If field delivery is imminent, allow delivery to progress spontaneously.
2. Support baby's head so that it doesn't emerge too quickly.
3. Tear amniotic membrane if it is still intact and visible outside the vagina.
4. Check for cord around neck. If cord is around neck, try to slip it over the shoulder and head. If unable to remove the cord from around neck, place umbilical clamps 2 inches apart and cut cord between clamps.
5. The baby will be wet and slippery. Carefully support head throughout delivery. Suction baby's mouth then nose with bulb syringe as soon as head emerges.
6. Tell the mother to resume pushing. Support the head as it rotates. A slight lowering of the baby to allow delivery of the anterior (top) shoulder, and then gentle lifting to allow delivery of the posterior (bottom) shoulder may be helpful. The baby should deliver completely.

AFTER DELIVERY

7. Routine Medical Care.
8. Placenta should deliver within 20-30 minutes. Do not delay transport while waiting for placenta to deliver.
9. Observe for excessive bleeding.

ILS & ALS

1. If field delivery is imminent, allow delivery to progress spontaneously.
2. Support baby's head so that it doesn't emerge too quickly.
3. Tear amniotic membrane if it is still intact and visible outside the vagina.
4. Check for cord around neck. If cord is around neck, try to slip it over the shoulder and head. If unable to remove the cord from around neck, place umbilical clamps 2 inches apart and cut cord between clamps.
5. The baby will be wet and slippery. Carefully support head throughout delivery. Suction baby's mouth then nose with bulb syringe as soon as head emerges.
6. Tell the mother to resume pushing. Support the head as it rotates. A slight lowering of the baby to allow delivery of the anterior (top) shoulder, and then gentle lifting to allow delivery of the posterior (bottom) shoulder may be helpful. The baby should deliver completely.

AFTER DELIVERY

7. Routine Medical Care.
8. Placenta should deliver within 20-30 minutes. Do not delay transport while waiting for placenta to deliver.
9. Observe for excessive bleeding.
10. IV Lactated ringers (1000 mL) with macrodrip tubing, TKO if SBP > 100 mmHg. Run wide open if SBP < 100 mmHg.

OB/GYN

SEVERE VAGINAL HEMORRHAGE (Postpartum or Miscarriage)

FR/EMR & BLS

1. Assure an airway, ventilate as needed.
2. Routine Medical Care.
3. Place a sanitary napkin over the vaginal opening. Make a note for the time the napkin was placed. Remove pads as they become soaked, but save all pads to use in evaluating blood loss.
4. Save all tissue that is passed.
5. Massage fundus of uterus to keep firm and contracted.
6. If patient becomes hypotensive, position patient on left side with legs elevated.

ILS

1. Assure an airway, ventilate as needed.
2. Routine Medical Care.
3. Place a sanitary napkin over the vaginal opening. Make a note for the time the napkin was placed. Remove pads as they become soaked, but save all pads to use in evaluating blood loss.
4. Save all tissue that is passed.
5. Massage fundus of uterus to keep firm and contracted.
6. If patient becomes hypotensive, position patient on left side with legs elevated.
7. Promptly transport patient.
8. IV Lactated Ringers (1000 mL) with macrodrip tubing, TKO if SBP > 90 mmHg. Run wide open if SBP<90 mmHg.

ALS

1. Assure an airway, ventilate as needed.
2. Routine Medical Care.
3. Place a sanitary napkin over the vaginal opening. Make a note for the time the napkin was placed. Remove pads as they become soaked, but save all pads to use in evaluating blood loss.
4. Save all tissue that is passed.
5. Massage fundus of uterus to keep firm and contracted.
6. If patient becomes hypotensive, position patient on left side with legs elevated.
7. Promptly transport patient.
8. IV Lactated Ringers (1000 mL) with macrodrip tubing, TKO if SBP > 90 mmHg. Run wide open if SBP<90 mmHg.
9. Consider administering **TRANEXAMIC ACID** (TXA) 1 gm over 10 minutes. Use infusion pump.

OB/GYN

ABNORMAL DELIVERIES – PROLAPSED CORD

FR/EMR

1. Routine Medical Care.
2. Oxygen via nasal cannula 4 liters per minute.

BLS

1. Routine Medical Care.
2. Oxygen via nasal cannula 4 liters per minute.
3. Transport immediately.
4. Place mother in knee-chest position or in a supine position with hips elevated on pillow.
5. Protect cord from being compressed by placing sterile gloved hand in vagina between pubic bone and presenting part with cord between fingers and exert counter pressure against presenting part. Keep hand in position until relieved.
6. Palpate cord for pulsations.
7. DO NOT ATTEMPT TO PUSH CORD BACK.
8. Keep exposed cord moist and warm.

ILS & ALS

1. Routine Medical Care.
2. Oxygen via nasal cannula 4 liters per minute.
3. Transport immediately.
4. Place mother in knee-chest position or in a supine position with hips elevated on pillow.
5. Protect cord from being compressed by placing sterile gloved hand in vagina between pubic bone and presenting part with cord between fingers and exert counter pressure against presenting part. Keep hand in position until relieved.
6. Palpate cord for pulsations.
7. DO NOT ATTEMPT TO PUSH CORD BACK.
8. Keep exposed cord moist and warm.
9. IV of Lactated Ringers TKO enroute.

OB/GYN

ABNORMAL DELIVERIES – BREECH PRESENTATION

FR/EMR, BLS, ILS, ALS

1. Routine Medical Care.
2. Oxygen via nasal cannula 4 LPM.
3. Transport immediately.
4. Never attempt to pull the baby from the vagina by the legs or trunk.
5. As soon as legs are delivered, support baby's body.
6. After shoulders are delivered, gently elevate trunk and legs to aid in delivery of head (if face down).
7. Head should deliver in 30 seconds. If not – reach 2 fingers into the vagina to locate the infant's mouth. Press vaginal wall away from baby's mouth to force an airway. Apply gentle pressure to the mother's fundus.

OSF HEALTHCARE
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OB/GYN

RAPE/SEXUAL ASSAULT

FR/EMR, BLS, ILS & ALS

1. Ensure scene safety. Survey the scene giving special consideration to preserving any articles of evidence on or around the patient.
    a. Discourage patient from changing clothes, urinating, or washing/showering.
    b. Collaborate with police to determine what articles (e.g. clothing) will be transported with the patient.
    c. Do not physically examine genital area unless there are apparent injuries which need treatment.
    d. All linen used by the patient should be left with the patient at the Emergency Department.
2. If patient is injured: Routine trauma care. If no obvious injuries, routine medical care.
3. Notify law enforcement (if not already at scene).
4. Only ask questions pertinent to injury.
5. See *Reporting of Suspected Crime* policy/procedure.
6. Transport to Approved SANE (Sexual Assault Nurse Examiner) staffed facility (ie. OSF Saint Joseph, Advocate BroMenn, OSF Saint Francis)

ABUSE

SUSPECTED DOMESTIC ABUSE/NEGLECT

FR/EMR, BLS, ILS & ALS

1. General approach:
    a. Consider scene safety issues. If the suspected offender is present and interferes with transportation of the patient or is influencing the patient's acceptance of medical care, contact police and medical control and appropriate action.
    b. Routine medical/trauma care.
    c. Treat obvious injuries or illness.
    d. Survey scene for evidence of abuse neglect:
        i. Environmental
        ii. Interaction with family members
        iii. Discrepancies in history of events
        iv. Injury patterns that do not correlate with the history of patient use and mobility.
        v. Signs of intentional injury or emotional harm.
2. Transport.
3. Prehospital providers are not mandated to report suspected domestic abuse, but are required to discretely offer the victim information on where assistance may be obtained.
4. Thoroughly document the history and physical exam findings on the patient care report.

NOTE:

- As with all patients, confidentiality is of the utmost importance. No suspicion or accusations of abuse should be transmitted over the radio.

ABUSE

SUSPECTED ELDER ABUSE/NEGLECT

FR/EMR, BLS, ILS, ALS

1. General approach:
    a. Consider scene safety issues. If the suspected offender is present and interferes with transportation of the patient or is influencing the patient's acceptance of medical care, contact police and medical control for appropriate action.
    b. Routine medical/trauma care.
    c. Treat obvious injuries or illness.
    d. Survey scene for evidence of abuse neglect:
        i. Environmental
        ii. Interaction with family members
        iii. Discrepancies in history of events
        iv. Injury patterns that do not correlate with the history of patient use and mobility.
        v. Signs of intentional injury or emotional harm.
2. Transport.
3. Upon arrival, notify the receiving physician or nurse of the suspected abuse. Healthcare workers (including prehospital providers) are mandated by Illinois law to report cases of suspected abuse or neglect. You may contact the elderly abuse hotline 1-800-252-4343.
4. Thoroughly document the history and physical exam findings on the prehospital report.

NOTES:

- As with all patients, confidentiality is of the utmost importance. No suspicion or accusations of abuse should be transmitted over the radio.

OSF HEALTHCARE
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Version History

The following is the update lineage to the EMS protocols manual. Editions prior to June 1st, 2019 are NOT included in this history. Providers shall routinely check the system website (https://www.osfhealthcare.org/saint-james/services/emergency/emergency-medical-services/) to verify this copy is the most current edition. Only the most current edition, as listed on the website, shall be used for medical guidance. Previous editions shall be considered obsolete.

Version	Date of Enactment	List of Changes from Previous
Initial Draft	N/A: Internal release only	N/A: not released to public
1.0	June 1st, 2019	Draft for public review, waiting submission to IDPH, subject to change
1.1	July 10th, 2019	Draft for public review, grammar edits and language clarification
1.2	Sept 10, 2019	Revised draft after Medical Director review
1.3	Sept 25, 2019	Revised after 2nd Medical Director review
1.4	Dec 2019	IDPH Reviewed
1.5	March 2020	Revised push dose epi protocols, medication mixed with normal saline