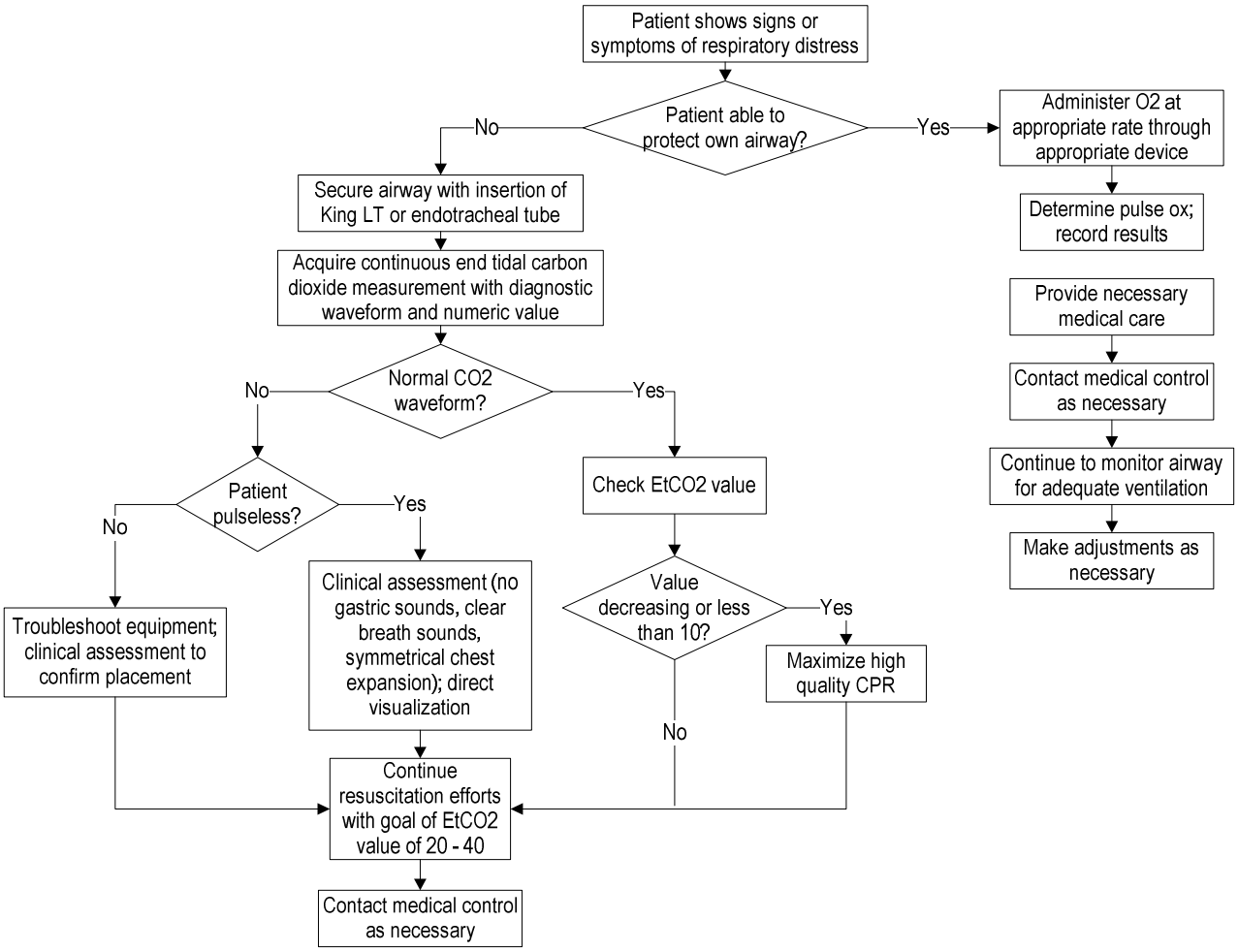
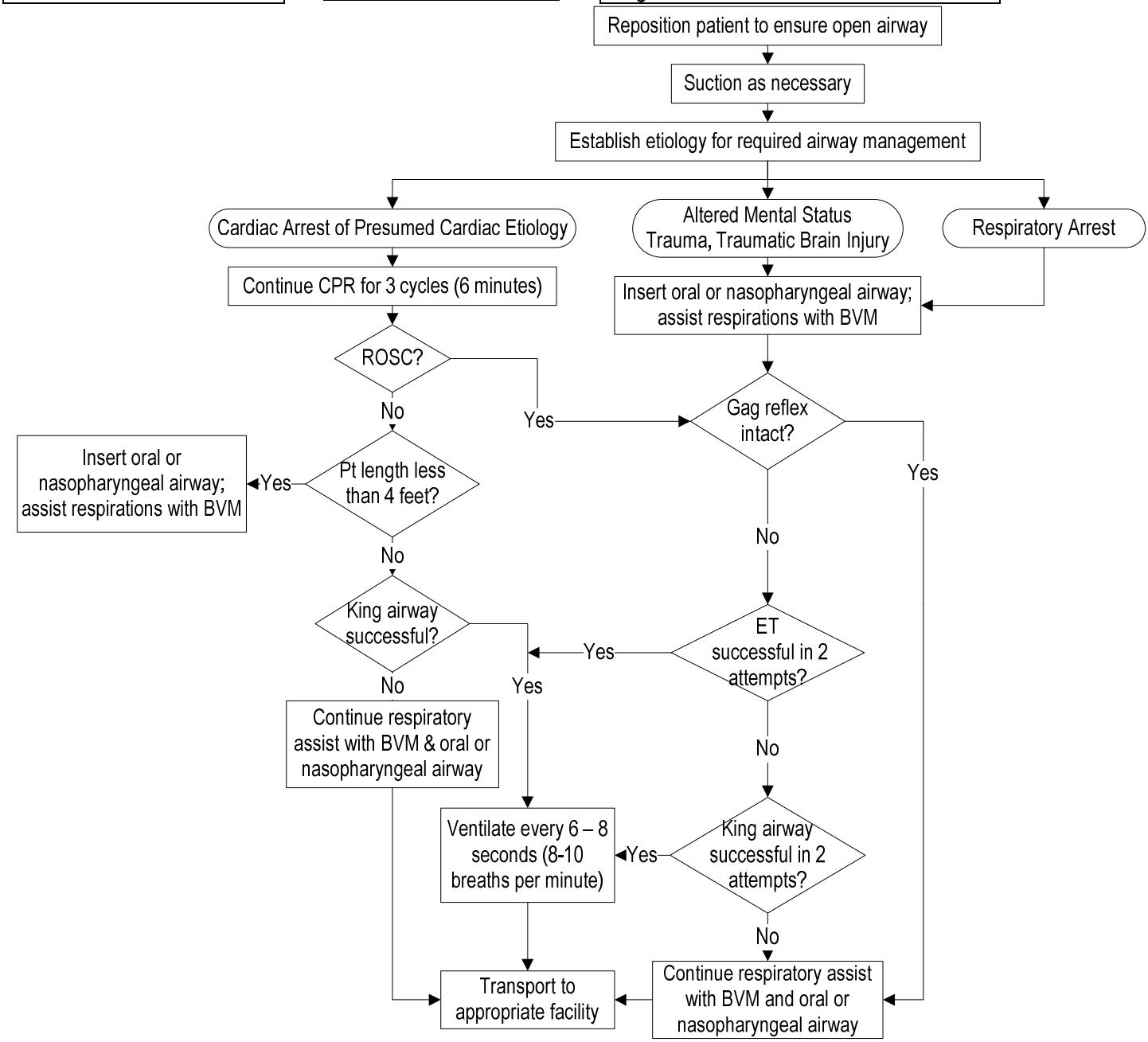
Initial: 9/12/01	**MILWAUKEE COUNTY EMS STANDARD OF CARE ADVANCED AIRWAY MONITORING**	Approved by: Ronald Pirrallo, MD, MHSA
Reviewed/revised: 7/1/11		Signature:
Revision: 2		Page 1 of 1



NOTES:

- Normal room air oxygen saturation (pulse ox) is 94 – 100%.
- A normal ETCO2 reading is 33 - 43 mm Hg.
- Ventilation rate is 8 - 10 breaths/minute for victims of cardiac arrest.

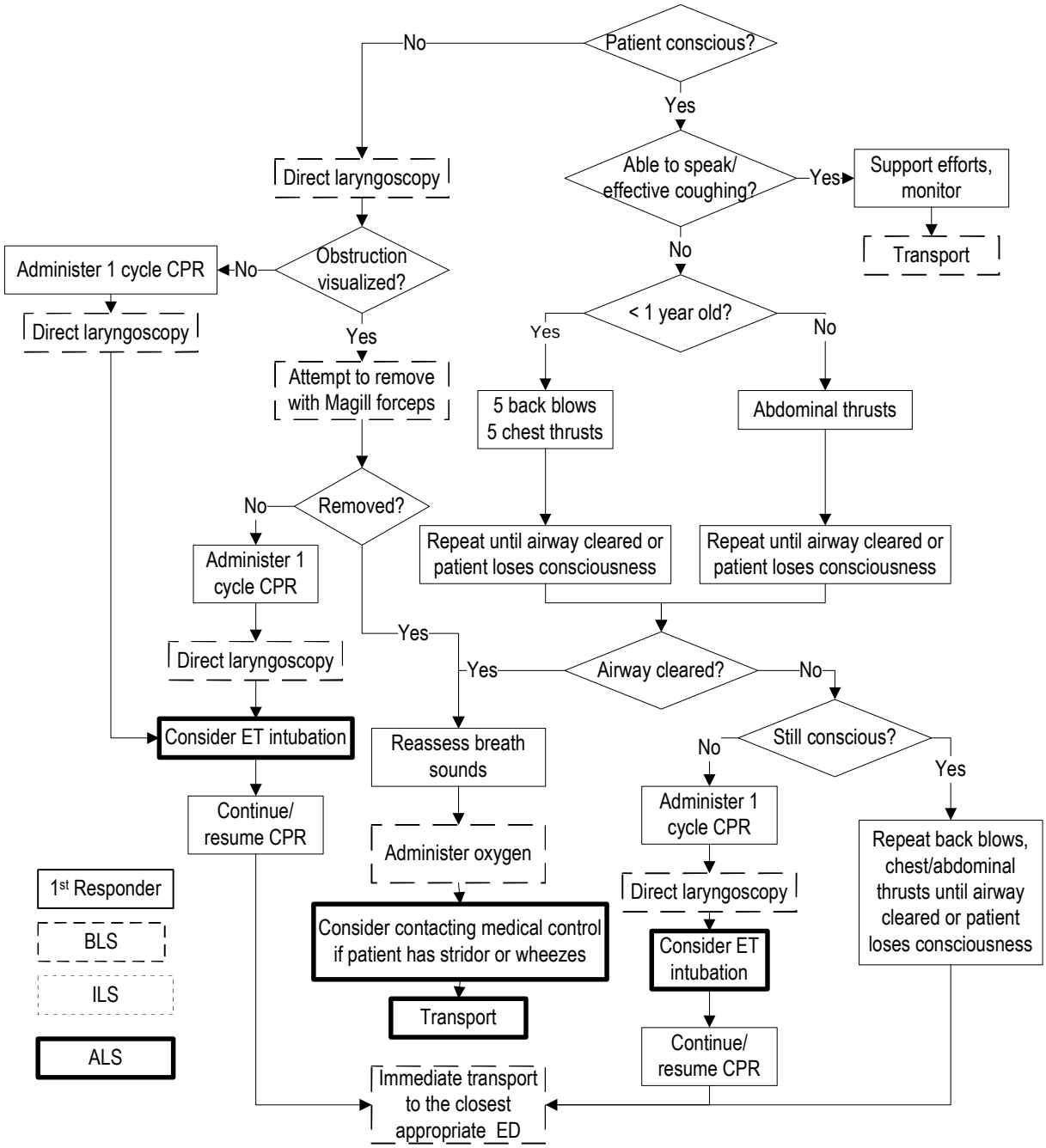
Initiated: 7/1/11	**MILWAUKEE COUNTY EMS STANDARD OF CARE**	Approved by: Ronald Pirrallo, MD, MHSA
Reviewed/revised:	**AIRWAY MANAGEMENT**	
Revision:		Page 1 of



NOTES:

- Limit intubation and King airway insertion attempts to one attempt per provider with a total of two attempts. Assure adequate oxygenation and ventilation between attempts.
- An intubation attempt is defined as “the insertion of the laryngoscope blade into the oropharynx”.

Initiated: 9/92	**MILWAUKEE COUNTY EMS STANDARD OF CARE**	Approved by: Ronald Pirrallo, MD, MHSA
Reviewed/revised: 7/1/11		
Revision: 4	**AIRWAY OBSTRUCTION**	Page 1 of 1

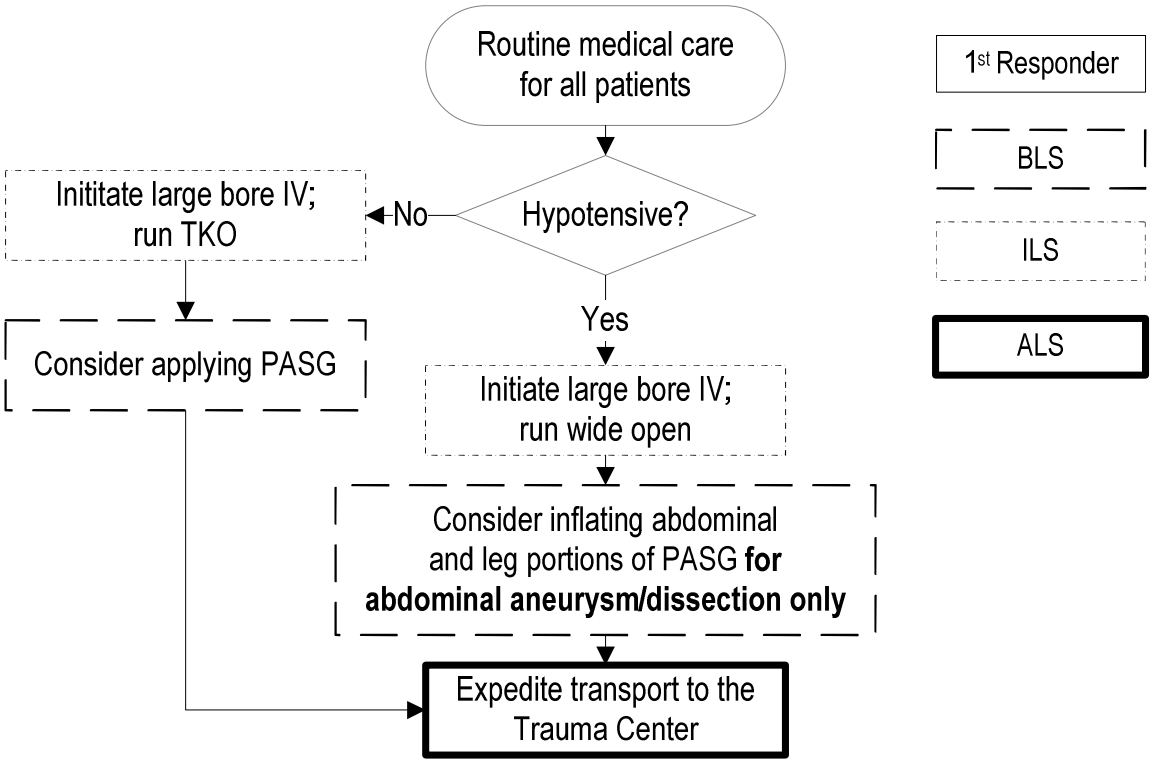


NOTES:

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

Initiated: 3/7/00	**MILWAUKEE COUNTY EMS STANDARD OF CARE**	Approved by: Ronald Pirrallo, MD, MHSA
Reviewed/revised: 7/1/11		
Revision: 4	**AORTIC RUPTURE/DISSECTION**	Page 1 of 1

History:	Signs/Symptoms:	Working Assessment:
History of hypertension History of arteriosclerosis Elderly male	Abdominal or back pain Pulsating mass in abdomen "Ripping", "tearing", "sharp" pain Unequal pulses in left and right pedal pulse points Hyper- or hypotension	Abdominal aortic aneurysm/ dissection
	Chest pain "Ripping", "tearing", "sharp" pain Distended neck veins (JVD) Unequal pulses in left and right radial pulse points Narrow pulse pressure Different blood pressures in left and right arms Hyper- or hypotension	Thoracic aortic aneurysm/ dissection

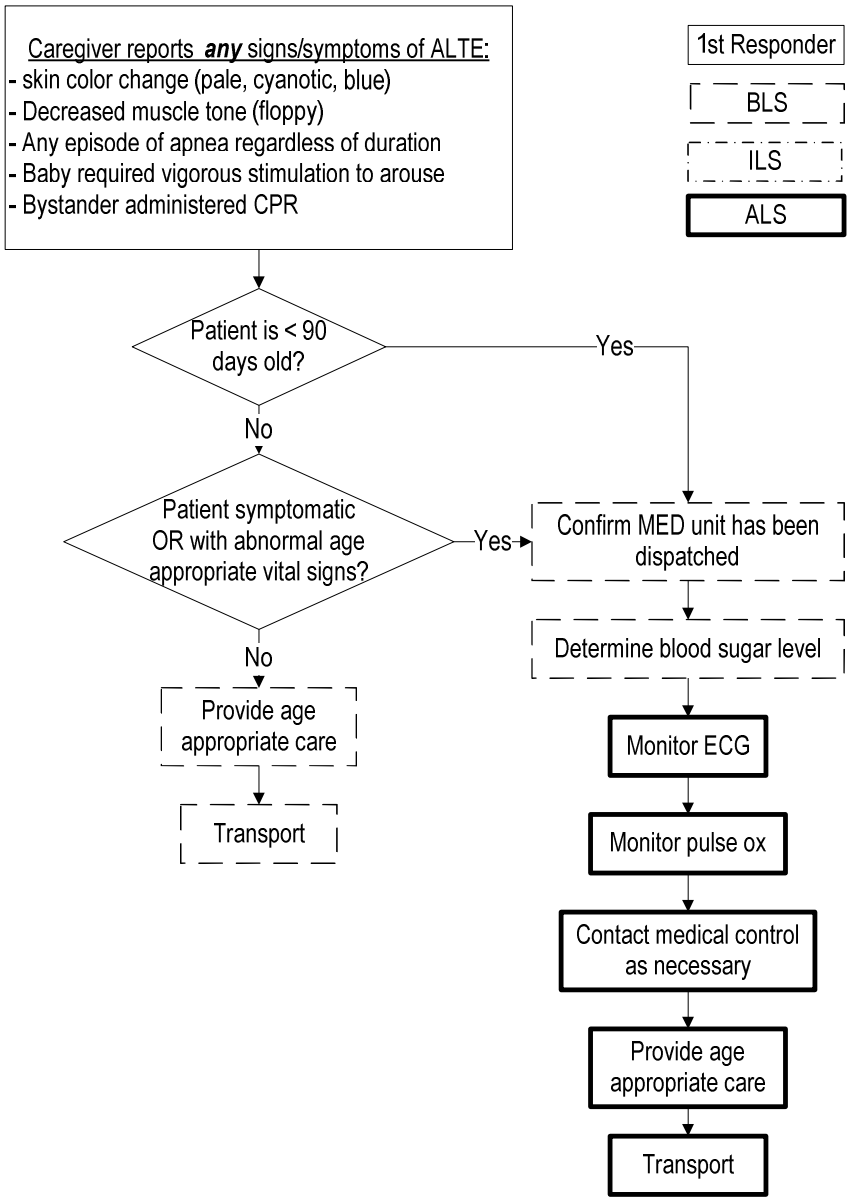


NOTES:

- PASG is contraindicated in thoracic aneurysm/dissection.
- Rapid transport to the closest appropriate facility is mandatory for all suspected aortic aneurysms and dissections. These patients may need immediate surgery.
- Aortic aneurysms occur most often in elderly males with a history of hypertension and/or arteriosclerosis.
- Thoracic aortic aneurysms may have signs and symptoms of stroke or myocardial infarction.

Initiated: 10/13/04	**MILWAUKEE COUNTY EMS STANDARD OF CARE**	Approved by: Ronald Pirrallo, MD, MHSA
Reviewed/revised: 7/1/11	**APPARENT LIFE THREATENING EVENT (ALTE)**	
Revision: 1		Page 1 of 1

History	Signs/Symptoms	Working Assessment
Respiratory infection GI reflux Seizure Premature birth Drug exposure Shaken baby syndrome (child abuse) Cardiac arrhythmia	May be asymptomatic at time of assessment	Apparent Life Threatening Event (ALTE)



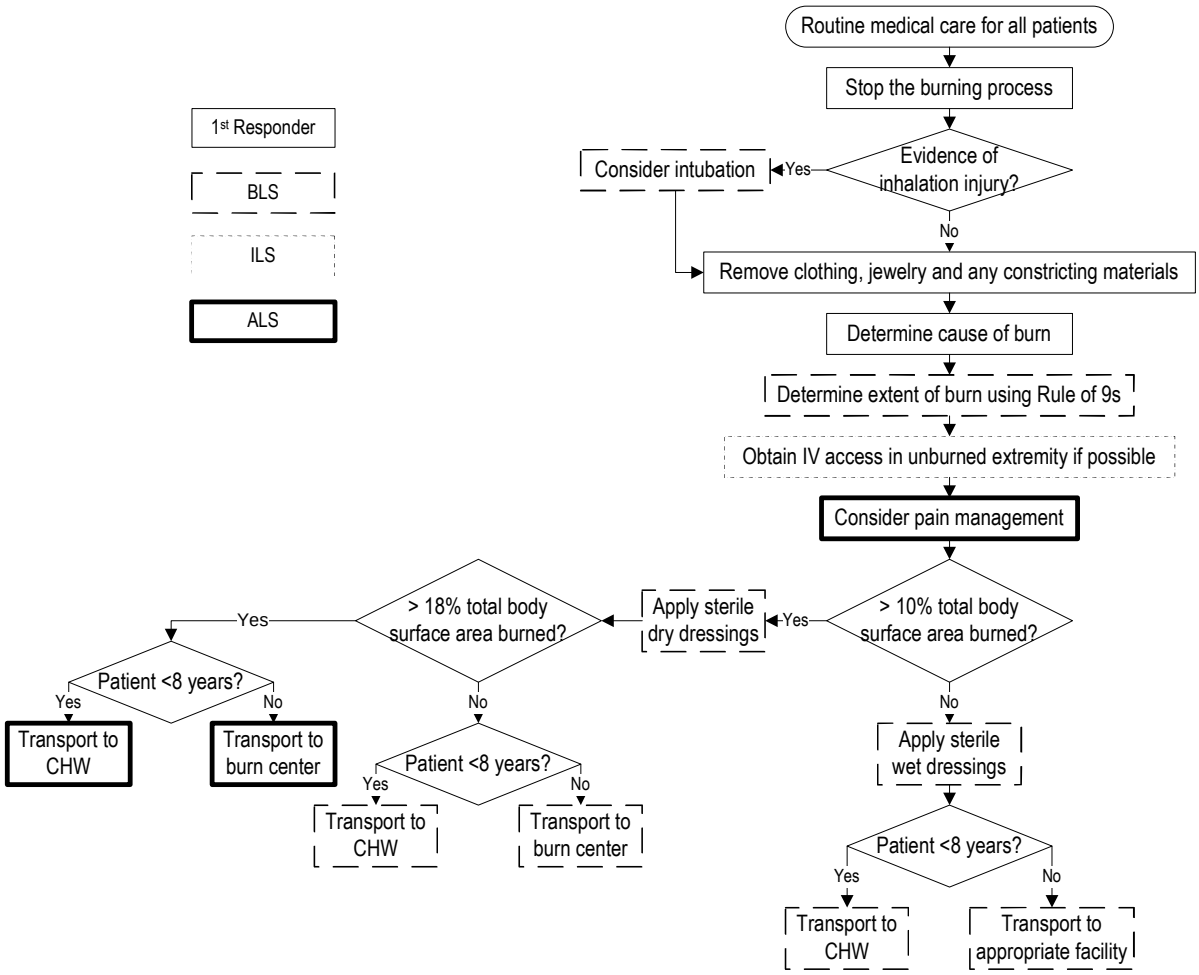
ā	Before	DKA	diabetic ketoacidosis
AAA	abdominal aortic aneurysm	DOA	dead on arrival
Abd	abdomen	DOE	dyspnea on exertion
ACS	acute coronary syndrome	DM	diabetes mellitus
AED	automatic external defibrillator	d/t	due to
AHA	American Heart Association	dx	diagnosis
AIDS	acquired immune deficiency syndrome	EBL	estimated blood loss
ALOC	altered level of consciousness	ED	emergency department
ALS	advanced life support	e.g.	for example
AMA	against medical advice	ECG	electrocardiogram
AMI	Acute myocardial infarction	epi	epinephrine
Amp	ampule	ET	endotracheal
Amt	amount	eval	evaluation
Ant	anterior	exam	examination
Approx	Approximately	F°	Fahrenheit
ARC	AIDS related complex	FB	foreign body
ASAP	as soon as possible	freq	frequency
ASHD	arteriosclerotic heart disease	Fx	fracture
BBB	bundle branch block	GI	gastrointestinal
BLS	basic life support	gm	gram
BP	blood pressure	GSW	gunshot wound
BS	blood sugar	gtts	drops
BS	breath sounds	hr	hour
c	with	Hep A	Hepatitis A (HAV)
C°	Celsius	Hep B	Hepatitis B (HBV)
CA	cancer	Hep C	Hepatitis C (HCV)
CABG	coronary artery bypass graft	HHN	hand held nebulizer
CAD	coronary artery disease	HIV	human immunodeficiency virus
Cath	catheter	H&P	history and physical exam
cc	cubic centimeter	HPI	history of present illness
CC	chief complaint	HTN	hypertension
Chemo	chemotherapy	Hx	history
CHF	congestive heart failure	IDDM	Insulin dependent diabetes mellitus
Cl	chloride	IM	Intramuscular
cm	centimeter	incr	increasing
CNS	central nervous system	inf	inferior
c/o	complaining of	IO	intraosseous
COPD	chronic obstructive pulmonary disease	IV	intravenous
CPR	Cardiopulmonary resuscitation	JVD	jugular vein distention
CRT	capillary refill time	kg	kilogram
c-section	Cesarean section	(L)	left
c-spine	cervical spine	lac	laceration
CSF	cerebrospinal fluid	lat	lateral
CSM	circulation, sensation, movement	lb	pound
CVA	cerebrovascular accident	LMP	last menstrual period
D&C	dilatation & curettage	LOC	level of consciousness
d/c	discontinue	loc	loss of consciousness
dec	decreased		

L-spine	lumbar spine	pt.	patient
MAST	military anti-shock trousers	PTA	prior to arrival
max	maximum	PVC	premature ventricular contraction
mcg	microgram	q	every
MD	medical doctor	R	respirations
mg	milligram	rt	right
MI	myocardial infarction	®	right
misc	miscellaneous	R/O	rule out
ml	milliliter	Rx	treatment
mm	millimeter	s	without
mod	moderate	SIDS	sudden infant death syndrome
mos	months	sig.	significant
N/A	not applicable	SL	sublingual
NAD	no acute distress	SOB	shortness of breath
neg	negative	SOC	standard of care
NG	nasogastric	SPS	standard for practical skill
NIDDM	non-insulin dependent diabetes mellitus	SQ	subcutaneous
NKA	no known allergies	subQ	subcutaneous
no.	number	S/Sx	signs and symptoms
NPO	nothing by mouth	stat	immediately
NSR	normal sinus rhythm	Sx	symptom
NTG	nitroglycerin	temp	temperature
N&V	nausea and vomiting	TB	tuberculosis
occ	occasional	TBSA	total body surface area
Oriented X3	oriented to time, place, person	TKO	to keep open
os	mouth	Tx	transport
oz	ounce	unk	unknown
p	after	URI	upper respiratory infection
P	pulse	VT	Ventricular tachycardia
PAC	premature atrial complex	VF	ventricular fibrillation
PAD	public access defibrillation	VS	vital signs
PASG	pneumatic anti-shock garment	w/	with
palp	palpation	w/o	without
PE	physical examination	WO	wide open
PE	pulmonary edema	y/o	year old
PE	pulmonary embolus	♂	male
PERL	pupils equal, reactive to light	♀	female
PJC	premature junctional contraction	↑	increased, improved
PMD	private (Personal)medical doctor	↓	decreased, worsened
PMH	past medical history	∅	none
PNB	pulseless non-breather	>	greater than
PND	paroxysmal nocturnal dyspnea	<	less than
POC	position of comfort		
pos	positive		
PP	policy/procedure		
PRN	as necessary		

Assessment	Likely History	Usual Signs/Symptoms	NOTES:
Respiratory Problem	Asthma COPD Chronic bronchitis Recent respiratory infection CHF	Difficulty breathing Increased or decreased respiratory rate Increased or decreased respiratory effort Abnormal breath sounds; retractions, nasal flaring Grunting, stridor, drooling, pursed lip breathing Short word strings	Lung/breath sounds are described and documented as clear, wet, decreased, absent, wheeze, or congested Respiratory effort is described and documented as normal, increased effort, decreased effort, or absent.
Cardiac Problem	MI Arrhythmia CHF CVA/TIA Hypertension	Chest pain with or without associated symptoms Absent or muffled heart tones Weak, irregular, or absent pulses Hypertension or hypotension Abnormal single or 12 lead ECG Prolonged capillary refill time; jugular vein distention Abnormal skin temperature or color Dehydration or edema	Heart tones are described and documented as present, absent, or muffled. Pulses are described and documented as full, weak, regular, irregular, or absent. Blood pressures should be auscultated whenever possible, palpated only when necessary. Skin temperature is described and documented as normal, hot, cool, diaphoretic, pale, flushed, cyanotic, jaundiced, or dehydrated. Pitting edema is the presence of a "pit" still visible after a finger is removed from an indentation made with that finger into the tissue. Note any cardiac medications the patient may be taking to help establish history.
Neurologic Problem	CVA/TIA Diabetic complications Recent trauma Coma	Altered level of consciousness Disoriented Inability to follow commands Pupils unequal, unreactive, pinpoint or dilated Paralysis, numbness, weakness, or absence of peripheral circulation, sensation or movement	Consider ALS transport to the Trauma center for any patient with any of the above symptoms due to traumatic injury.
Musculo-Skeletal Problem	Recent trauma Arthritis Chronic back pain Spinal/disc problems Recent surgery	Pain Decreased range of motion Paralysis, numbness, weakness or absence of peripheral circulation, sensation or movement change in normal tissue color or temperature Deformity, crepitus, soft tissue injury Swelling	Patients with two or more long bone (humerus, femur) fractures require ALS transport to the Trauma Center.
Abdominal problem	Ulcers Obstruction Recent surgery Renal disease Liver disease Pancreatic disease	Pain Nausea, vomiting, fever Change in elimination patterns Guarding, rigidity Hematemesis, melena Distention	
Gynecologic problem	Previous surgery Gynecologic problems/infection Pregnancies - live births/complications Last menstrual period	Pain Vaginal bleeding, discharge	
Labor Pre-eclampsia Toxemia	Pregnancies Prenatal care Toxemia Ectopic pregnancy Abortion - spontaneous/induced Last menstrual period	Pain/cramping Ruptured membranes Crowning Vaginal bleeding Hypertension with or without seizures	Patients experiencing complicated childbirth with any of the following must be transported by ALS: excessive bleeding, amniotic fluid contaminated by fecal material, multiple births, premature imminent delivery, abnormal fetal presentation (breech), prolapsed umbilical cord, newborn with a pulse less than 140, flaccid newborn or with a poor cry.

Initiated: 9/92	**MILWAUKEE COUNTY EMS STANDARD OF CARE**	Approved by: Ronald Pirrallo, MD, MHSA
Reviewed/revised: 7/1/11		
Revision: 9	**BURNS**	Page 1 of 1

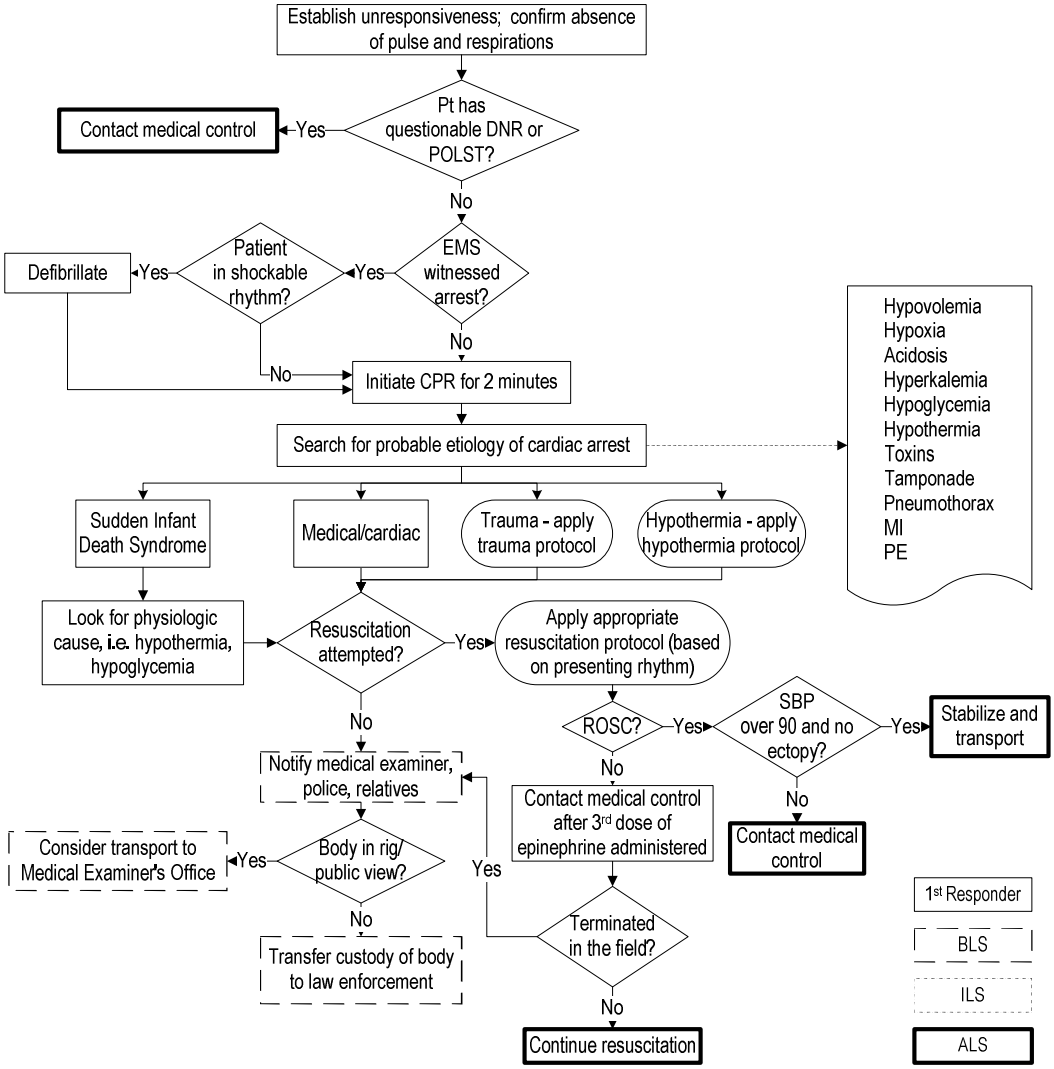
History:	Signs/Symptoms:	Working Assessment:
Type of burn: thermal, electrical, chemical, radiation Inhalation injury Confined space Associated trauma Loss of consciousness	Burn, pain, swelling Dizziness/ loss of consciousness Hypotension/shock Airway compromise/distress Singed facial or nasal hair Hoarseness Soot in airway passages	1st degree - red and painful 2nd degree (partial thickness)- blistering 3rd degree (full thickness) - painless and charred or leather-like appearance



NOTES:

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

Initiated: 11/73	**MILWAUKEE COUNTY EMS STANDARD OF CARE**	Approved by: Ronald Pirrallo, MD, MHSA
Reviewed/revised: 7/1/11	**CARDIAC ARREST**	
Revision: 26		Page 1 of 1



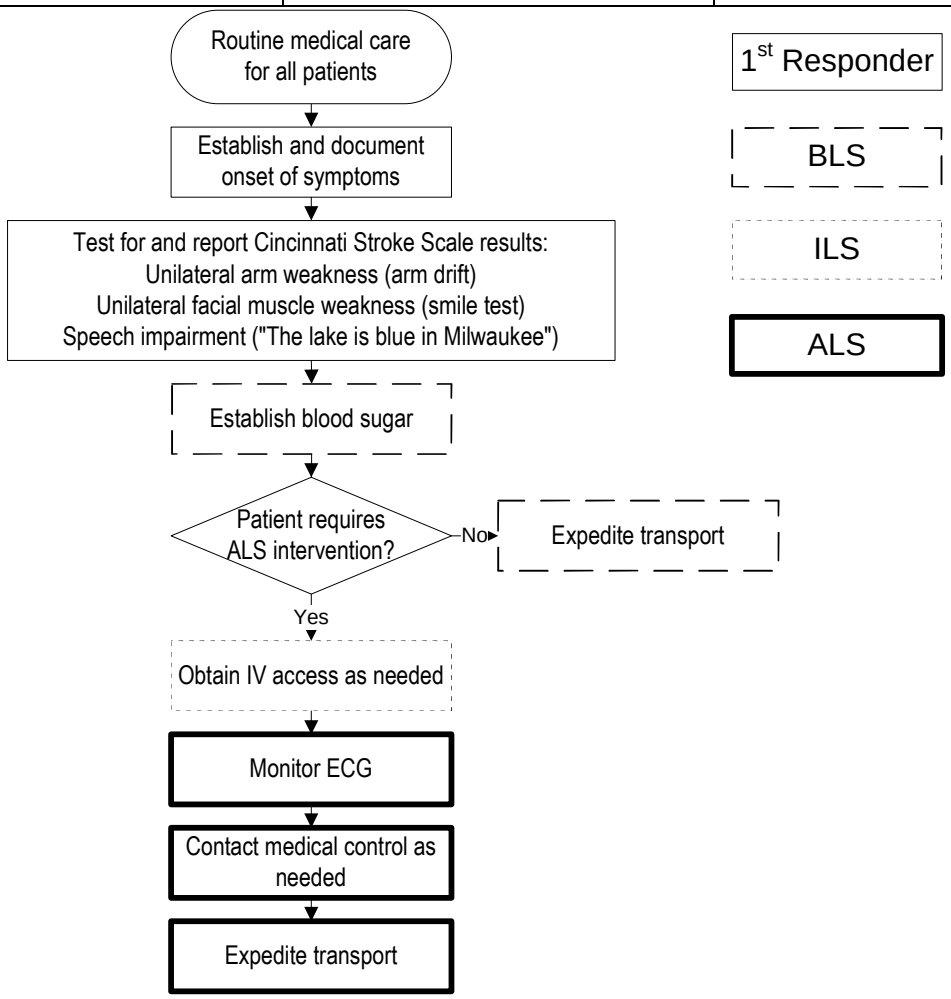
NOTES:

- BLS shall be started on all patients in cardiac arrest with the exception of victims with: decapitation; rigor mortis; evidence of tissue decomposition; dependent lividity; presence of a valid Do-Not-Resuscitate or POLST (Physician Orders for Life-Sustaining Treatment); fire victim with full thickness burns to 90% or greater body surface area.
  - A responding paramedic may cease a BLS initiated resuscitation attempt if:
    - No treatment other than CPR non-visualized airway insertion, and/or AED application with no shock advised ***OR***
    - Patient is in traumatic arrest and ECG shows asystole or PEA at a rate less than 30
  - If the patient does not meet the above criteria, and a resuscitation attempt is initiated, an order from medical control is required to terminate the attempt regardless of the circumstances.
- Routine use of Amiodarone or lidocaine after successful defibrillation is not indicated.
- For the suspected hypothermic patient in cardiac arrest, transport immediately to the Trauma Center. If the hypothermic patient is in Vfib, defibrillate once.
- Resuscitation must be attempted in traumatic cardiac arrests if the patient is in Vfib (defibrillate once and transport) or if the patient has a narrow QRS complex, regardless of the rate.
- For SIDS patients consider possible physiologic causes: hypothermia - warm the baby; hypoglycemia - check blood sugar and contact medical control.
- The system standard is: CPR will be provided whenever patient is pulseless; compressions between 90 and 120/minute; hands on chest more than 70% of time; minimum compression depth of 2 inches in adults 80% of the time.

Initiated: 9/92	**MILWAUKEE COUNTY EMS**	Approved by: Ronald Pirrallo, MD, MHSA
Reviewed/revised: 7/1/11	**STANDARD OF CARE**	
Revision: 5	**CEREBROVASCULAR**	Page 1 of 1

ACCIDENT/ TRANSIENT ISCHEMIC ATTACK (CVA/TIA)

History:	Signs/Symptoms:	Working Assessment:
High blood pressure Cigarette smoking History of CVA or TIAs Heart Disease Diabetes mellitus Atrial fibrillation Medications (anticoagulants) Positive family history	Unilateral paralysis or weakness Numbness, weakness Facial droop Language disturbance Visual disturbance Monocular blindness Vertigo Headache Seizures	CVA or TIA *Consider other causes*: Hypoglycemia Seizure disorder Trauma Ingestion



NOTES:

- Report to receiving hospital should include positive ***and*** negative results for Cincinnati Stroke Scale, addressing all three areas. Take precautions to avoid accidental injury to paralyzed extremities during patient movement.
- If time of symptom onset is well established as less than three hours, ***total scene time should be less than ten minutes.*** Patients may be candidates for aggressive stroke intervention treatments.

Every effort will be made to reduce the risk of transmitting potentially communicable diseases to our patients.

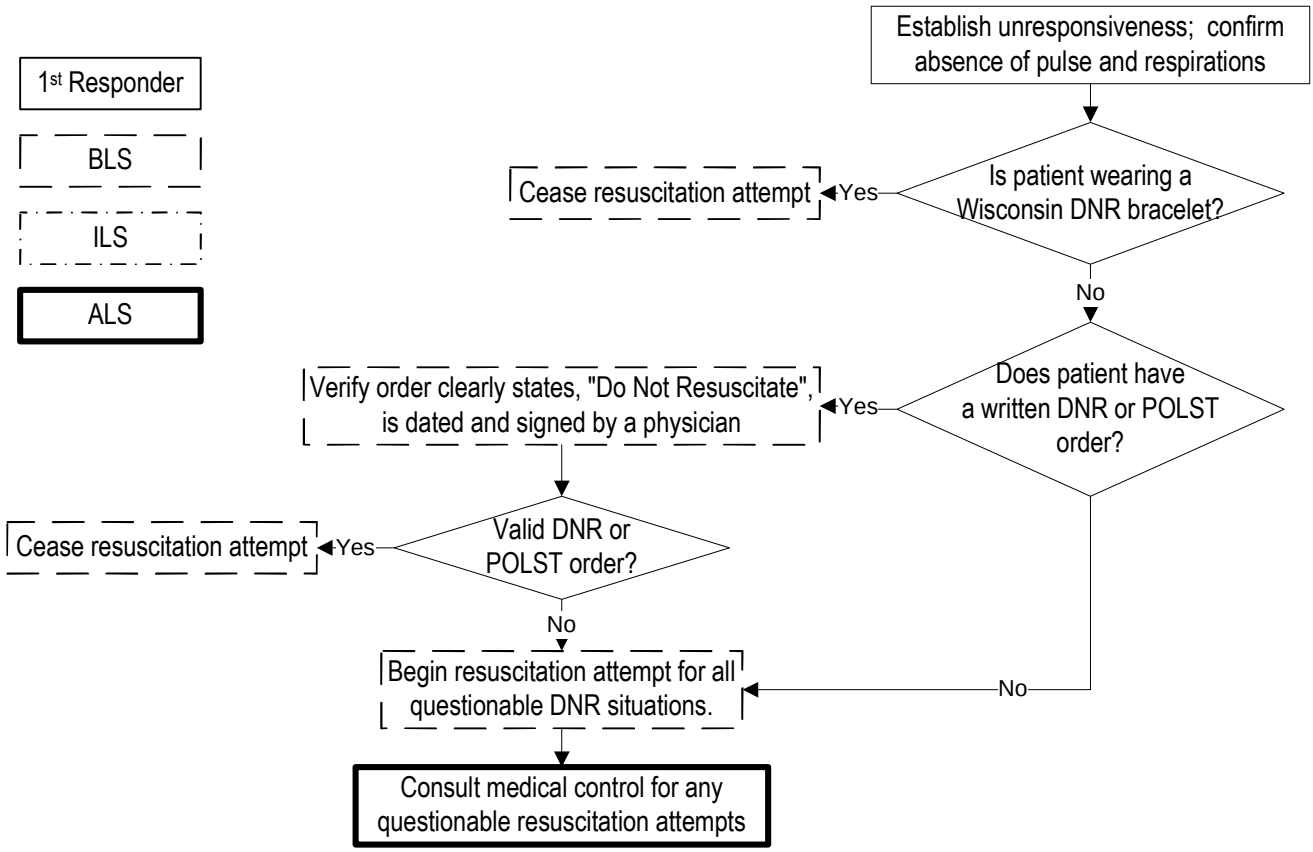
.

- Laryngoscope blades, Magill forceps, obturators and other metal objects in contact with the airway of a patient are to be scrubbed with hot water and soap to remove all secretions, rinsed thoroughly and then soaked for a minimum of 20 minutes in 1:10 dilution of 5.25% sodium hypochlorite (bleach) or 70% Isopropyl alcohol. A fresh solution should be used for each disinfection and the metal rinsed with water and air-dried before reuse.

NOTES:

- No equipment is to be cleaned in a sink used in food preparation, cleanup or routine handwashing.
- The following equipment is required to be used on a one-time bases:
  - Bag-valve mask
  - Endotracheal tube
  - Oxygen tubing
  - Oral airway
  - Nasopharyngeal airway
  - Suction tubing
  - Pocket mask

Initiated: 5/10/00	**MILWAUKEE COUNTY EMS STANDARD OF CARE**	Approved by: Ronald Pirrallo, MD, MHSA
Reviewed/revised: 7/1/11		
Revision: 6	**DO NOT RESUSCITATE ORDERS**	Page 1 of 1

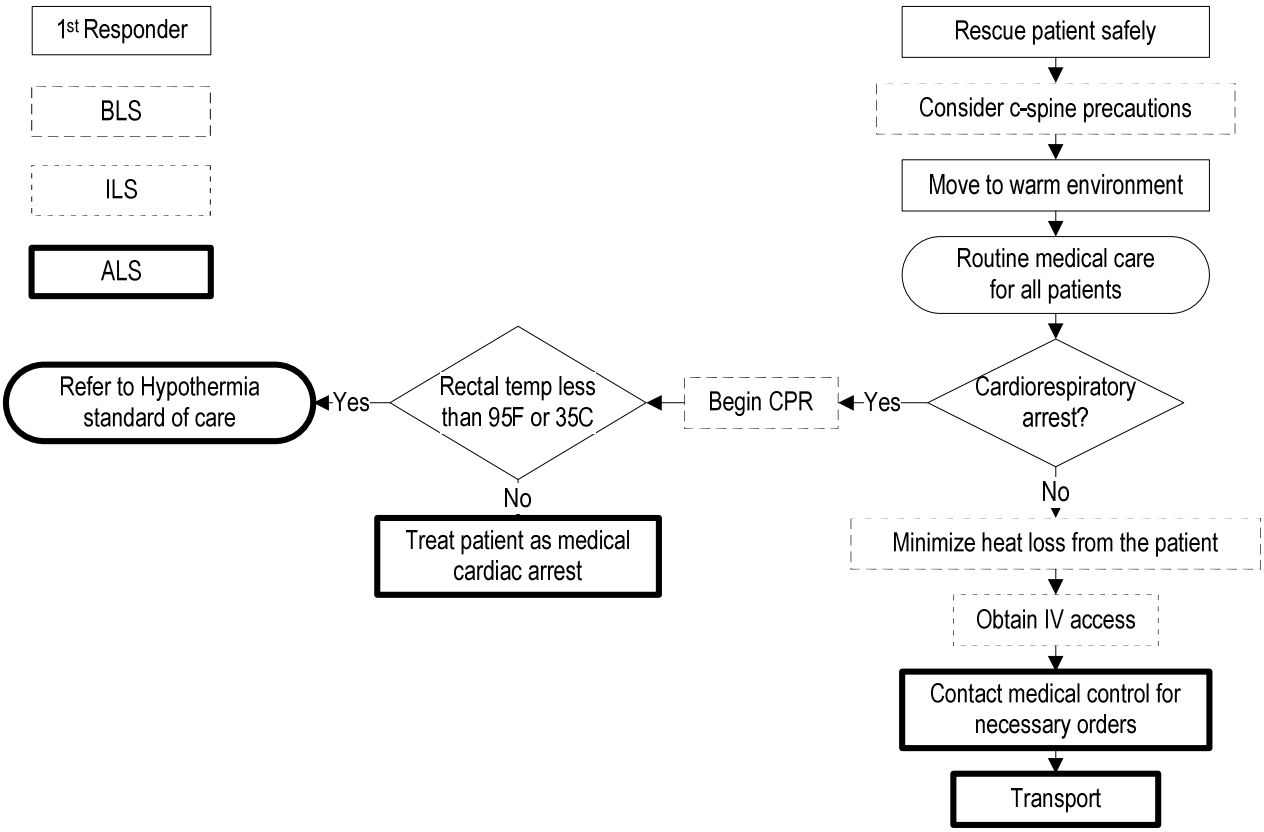


NOTES:

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

Initiated: 9/92	**MILWAUKEE COUNTY EMS STANDARD OF CARE**	Approved by: Ronald Pirrallo, MD, MHSA
Reviewed/revised: 7/1/11		
Revision: 5	**DROWNING**	Page 1 of 1

History:	Signs/Symptoms:	Working Assessment:
Patient found submerged in water	Altered level of consciousness Vomiting/aspiration Possible c-spine injury Possible hypothermia Possible cardiac arrest	Drowning



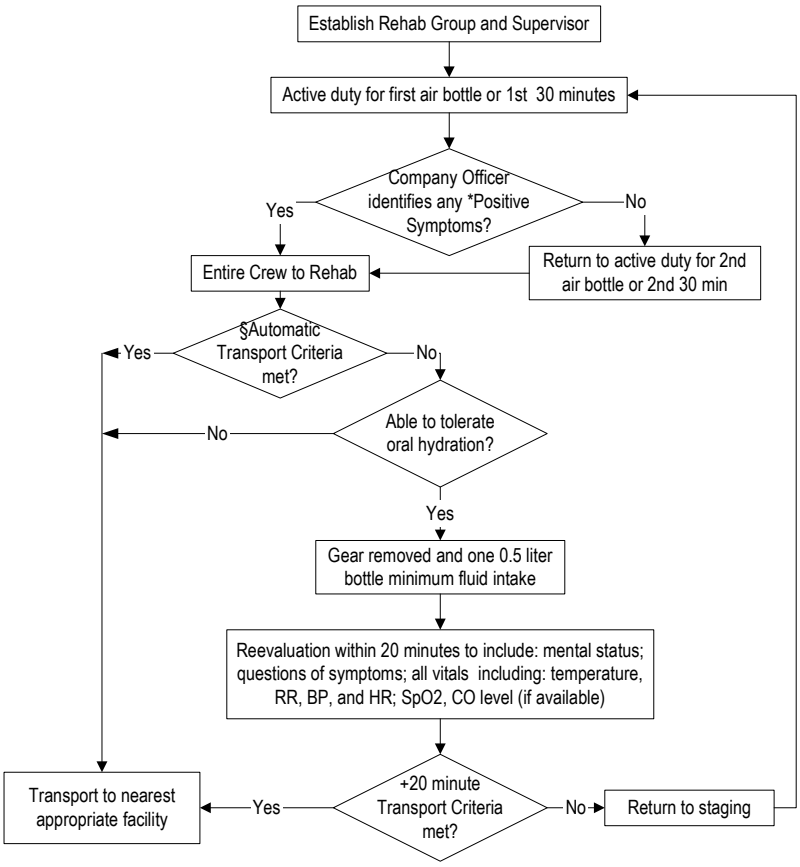
NOTES:

- Estimate the time of submersion.
- Note the type of water involved, i.e. bathtub, pool, lake, polluted, etc.
- Estimate the temperature of the water.
- Resuscitation should not be terminated until patient is adequately rewarmed.

Initiated: 2/27/02
Reviewed/revised: 7/1/11
Revision: 2

MILWAUKEE COUNTY EMS
STANDARD OF CARE
EMERGENCY INCIDENT REHABILITATION

Approved by: Ronald Pirrallo, MD, MHSA
Page 1 of 1



Transport Criteria Based on ALS Evaluation of Signs or Symptoms

*Positive Symptoms	§Automatic Transport Criteria	+20-Minute Transport Criteria
• Headache • Dizziness • Nausea/vomiting • Vision abnormalities • Paresthesias (numbness and/or tingling)	• Chest pain • Confusion • Shortness of breath • Palpitations or irregular heart beat sensations	• Any Automatic Transport Criteria • Any Positive Symptoms • HR 120 or greater • SBP 200 or greater ***OR*** 90 or less • T101 or greater ***OR*** 97 or less • RR 30 or greater • CO level greater than 10% • SpO_2 level less than 94

NOTES:

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

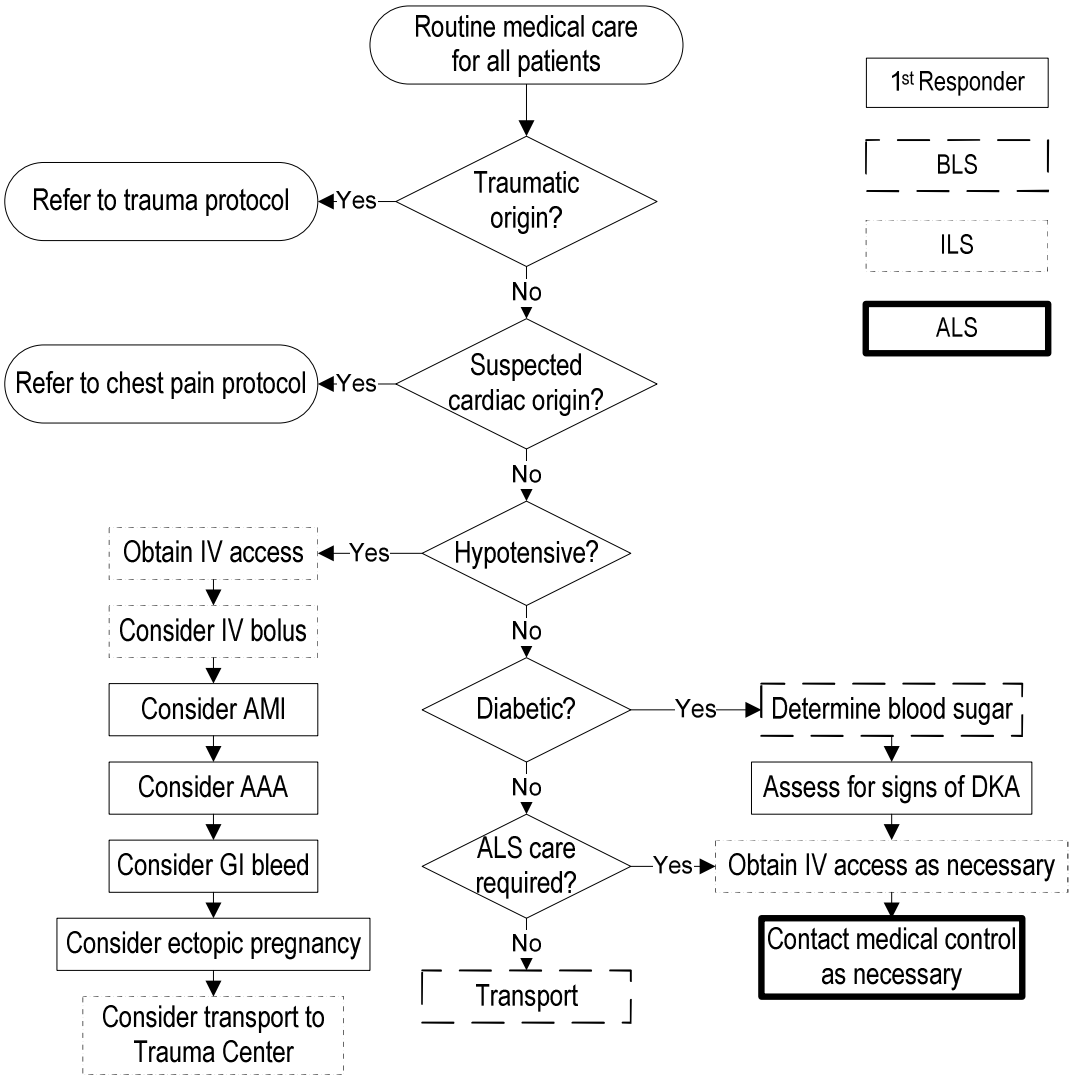
Initiated: 9/94
Reviewed/revised: 7/1/11
Revision: 3

MILWAUKEE COUNTY EMS STANDARD OF CARE

GASTROINTESTINAL/ ABDOMINAL COMPLAINTS

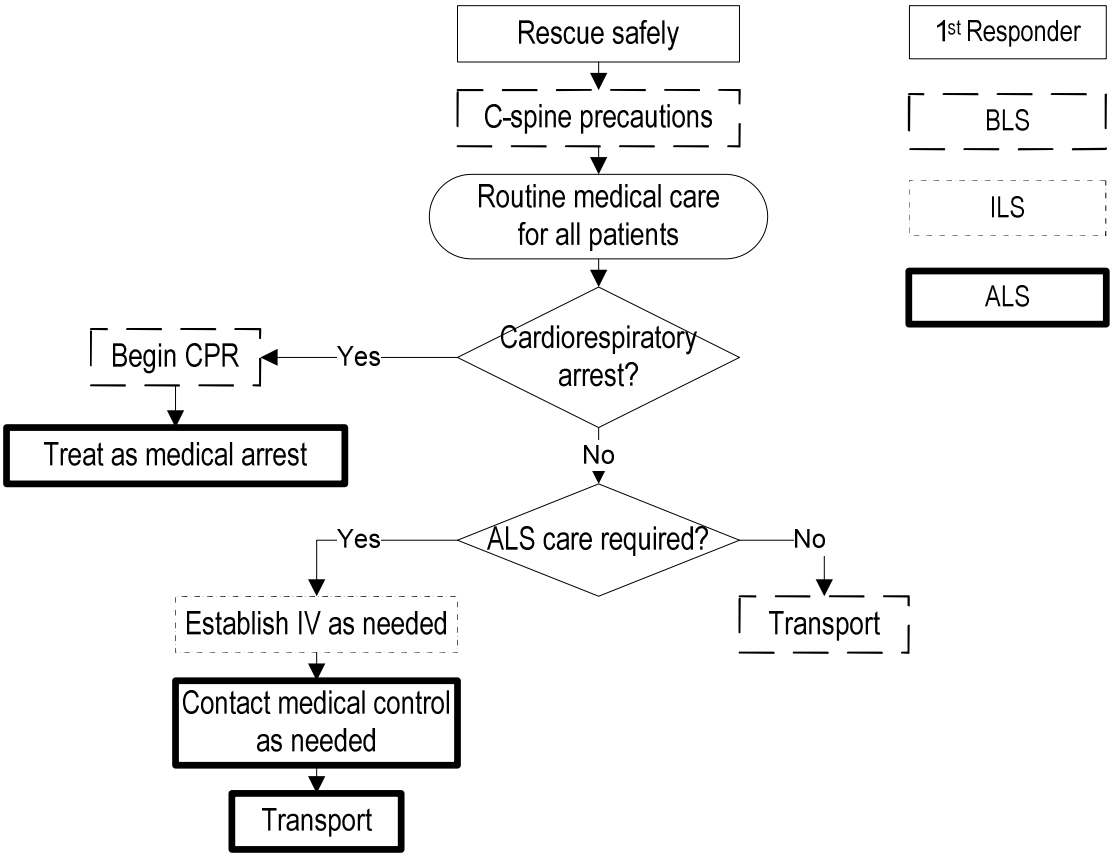
Approved by: Ronald Pirrallo, MD, MHSA
Page 1 of 1

History:	Signs/Symptoms:	Working Assessment:
History of abdominal problems: Ulcers, hiatal hernia, surgery Renal, liver, pancreatic, gall bladder disease Onset, duration, severity, radiation of pain Character of pain: crampy, sharp, dull, constant Last meal	Pain Nausea, vomiting Diarrhea Change in elimination patterns Guarding, rigidity Hematemesis, melena Distention	Abdominal pain GI bleed Acute abdomen Organ disease *Consider other causes:* Acute MI Abdominal aneurysm Ectopic pregnancy Diabetic ketoacidosis



Initiated: 9/92	**MILWAUKEE COUNTY EMS STANDARD OF CARE**	Approved by: Ronald Pirrallo, MD, MHSA
Reviewed/revised: 7/1/11		
Revision: 3	**HANGING**	Page 1 of 1

History:	Signs/Symptoms:	Working Assessment:
Patient found hanging	Altered level of consciousness Possible c-spine injury Possible cardiac arrest Respiratory distress	Hanging

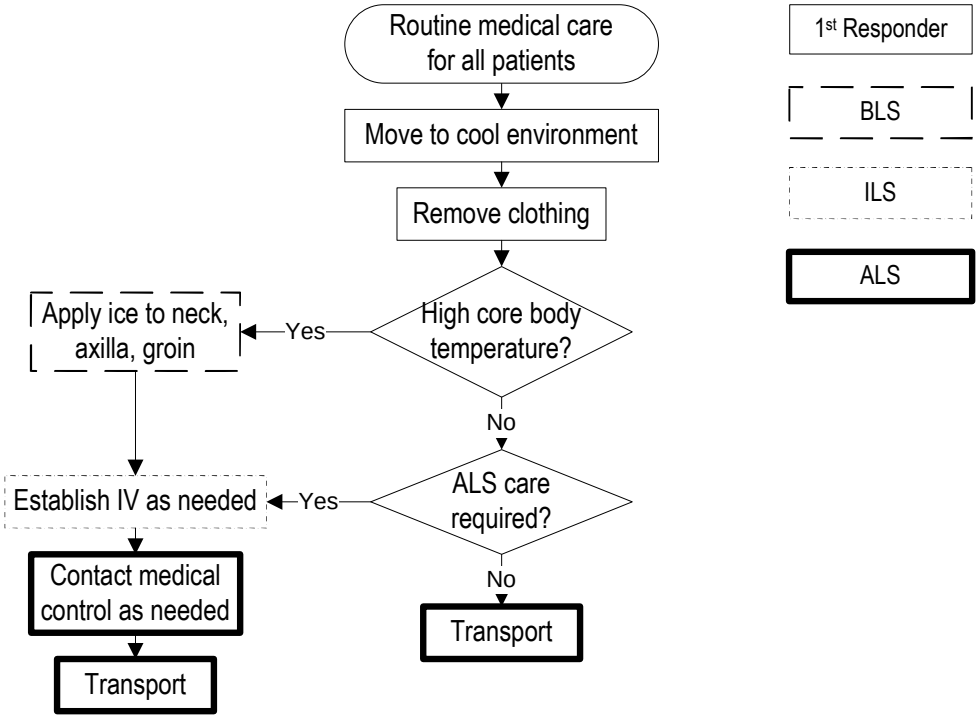


NOTES:

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

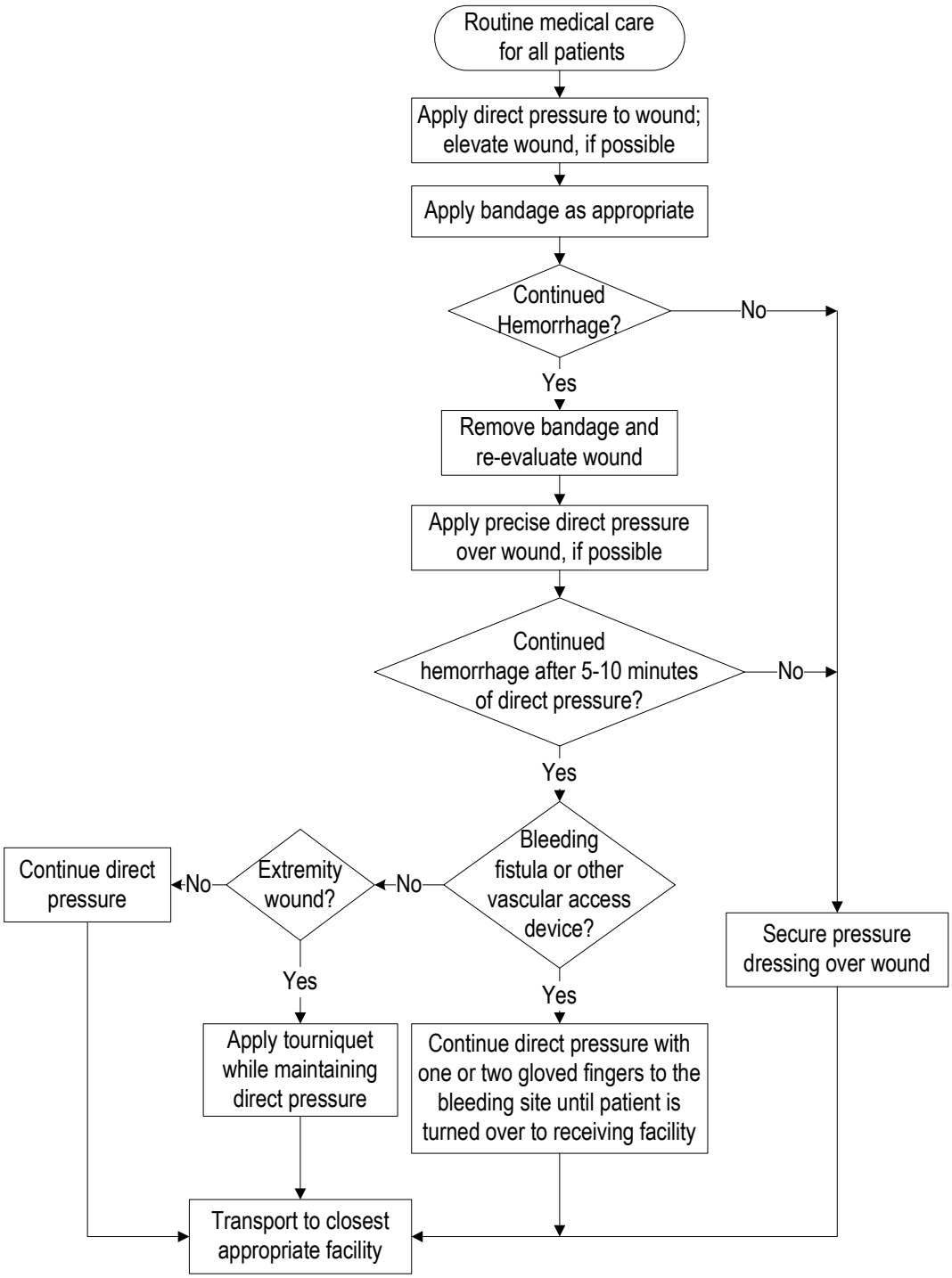
Initiated: 9/94	**MILWAUKEE COUNTY EMS STANDARD OF CARE**	Approved by: Ronald Pirrallo, MD, MHSA
Reviewed/revised: 7/1/11		
Revision: 2	**HEAT RELATED ILLNESS**	Page 1 of 1

History:	Signs/Symptoms:	Working Assessment:
Exposure to increased temperatures and/or humidity Physical exertion Decreased fluid intake Patient taking antidepressants or antipsychotic medications Patient age - very young or elderly	Altered level of consciousness Hot, dry or sweaty skin Hypotension or shock Seizures Nausea/vomiting Fatigue Muscle cramping	Heat cramps Heat exhaustion Heat stroke



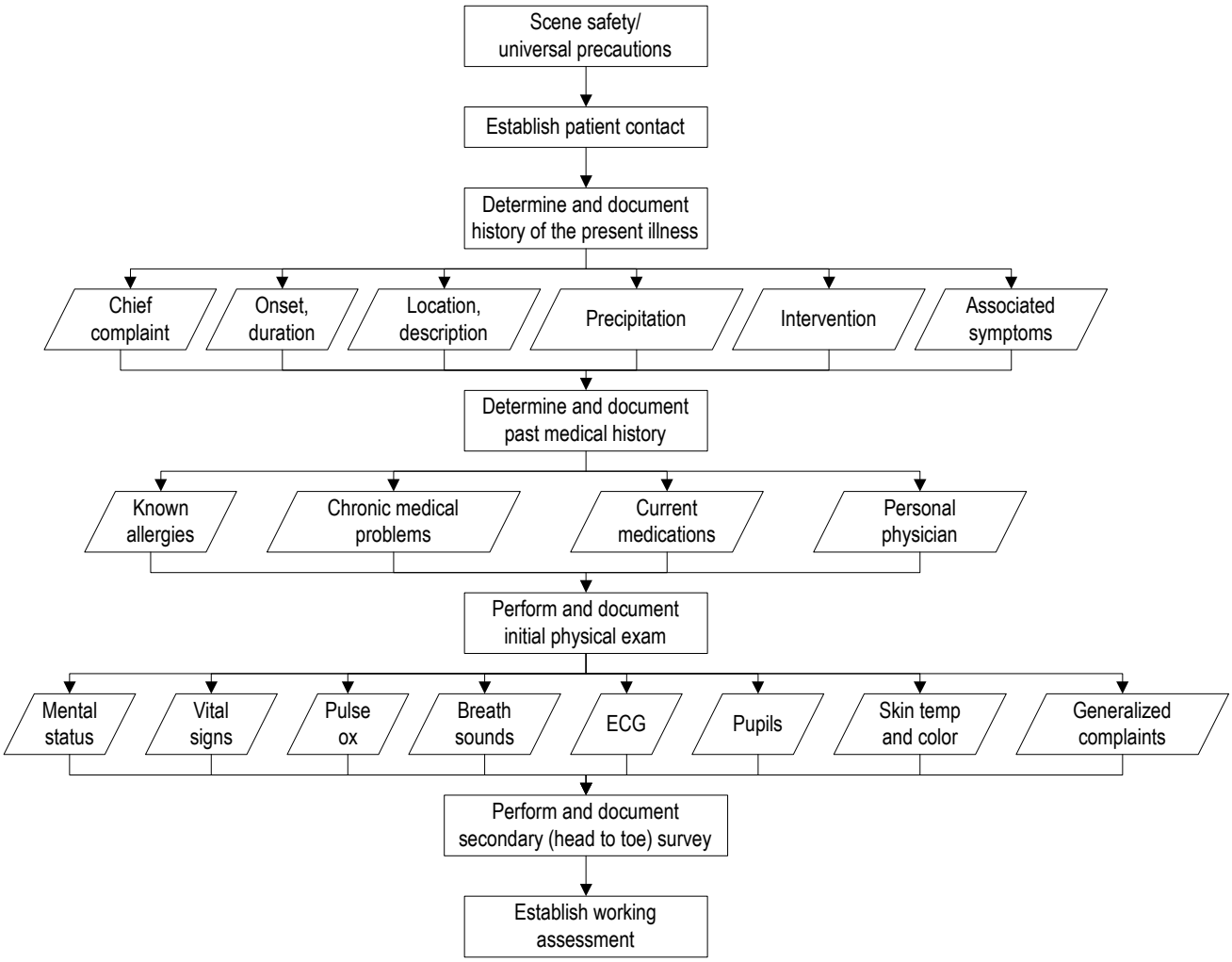
NOTES:

- The following patients are more prone to heat related illnesses:
  - Very young and elderly patients;
  - Patients on antidepressants, antipsychotic medications, or patients who have ingested alcohol.
- Cocaine, amphetamines, and salicylates may elevate body temperature.
- **Heat cramps** consist of benign muscle cramping due to dehydration and are not associated with elevated core temperature.
- **Heat exhaustion** consists of dehydration, dizziness, fever, mental status changes, headache, cramping, nausea and vomiting. Patients are usually tachycardic, hypotensive and hyperthermic.
- **Heat stroke** consists of dehydration, tachycardia, hypotension, temperature over 104°F (40°C). Patients with heat stroke generally lose the ability to sweat.



Notes:

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

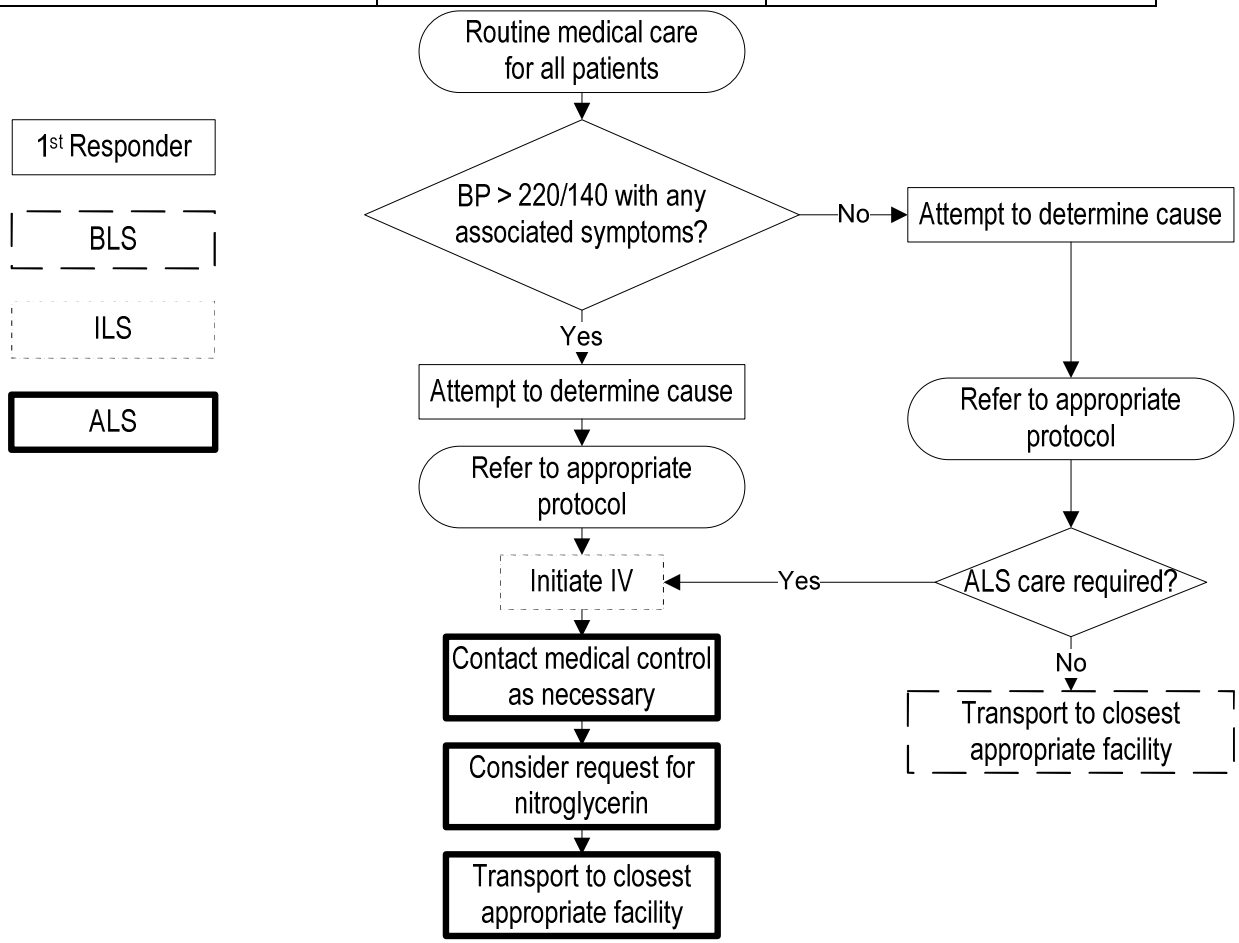


NOTES:

- Patients should be encouraged to describe the situation in their own words.
- Normal room air oxygen saturation (pulse ox) is 94 – 100%.

Initiated: 5/10/00	**MILWAUKEE COUNTY EMS STANDARD OF CARE**	Approved by: Ronald Pirrallo, MD, MHSA
Reviewed/revised: 7/1/11	**HYPERTENSION**	
Revision: 3		Page 1 of 1

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

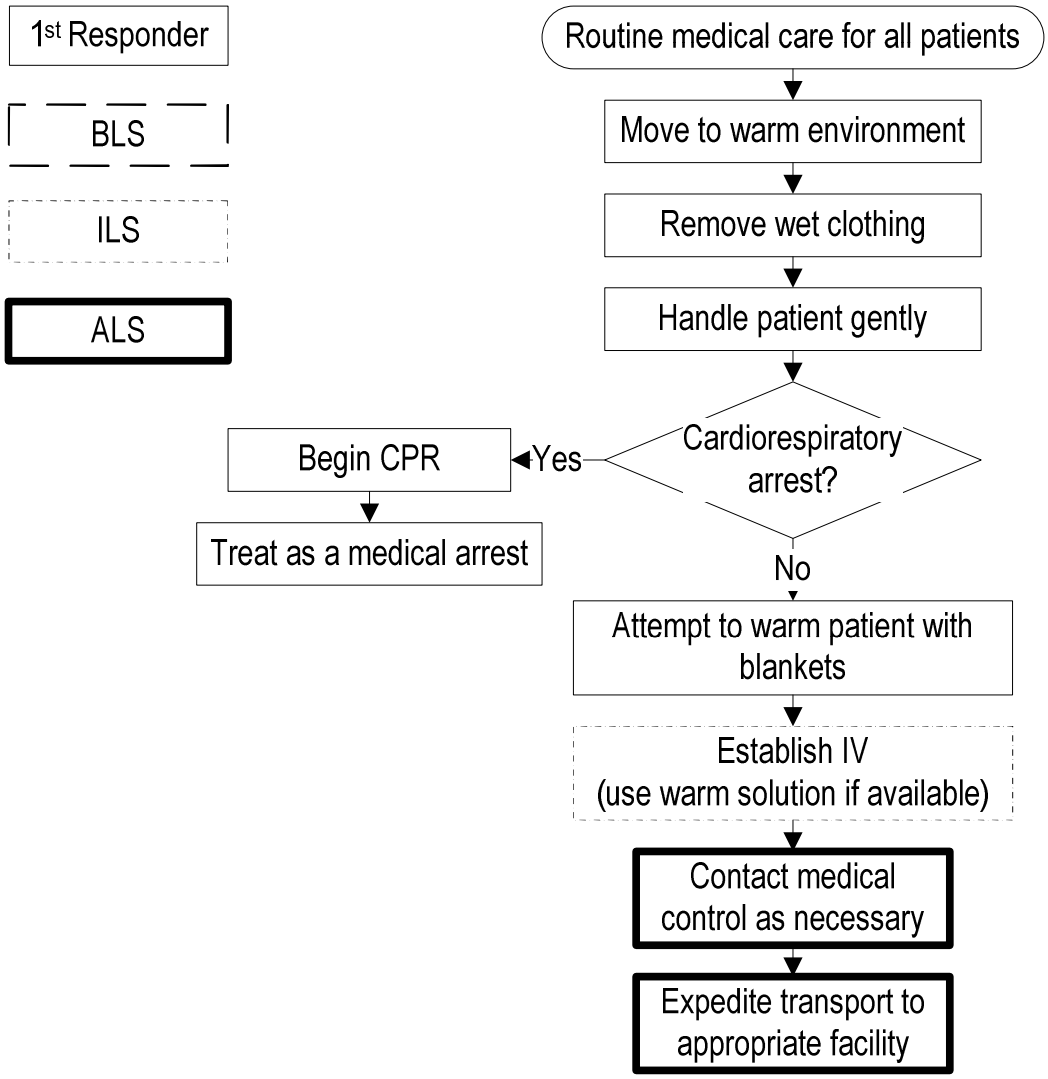


NOTES:

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

Initiated: 7/94	**MILWAUKEE COUNTY EMS STANDARD OF CARE**	Approved by: Ronald Pirrallo, MD, MHSA
Reviewed/revised: 7/1/11		
Revision: 5	**HYPOTHERMIA**	Page 1 of 1

History:	Signs/Symptoms:	Working Assessment:
Exposure to environment Extremes of age Drug use: Alcohol, barbiturates Patient wet History of infection	Cold Shivering or not Altered level of consciousness Pain or altered sensation to extremities Bradycardia Hypotension/shock	Hypothermia

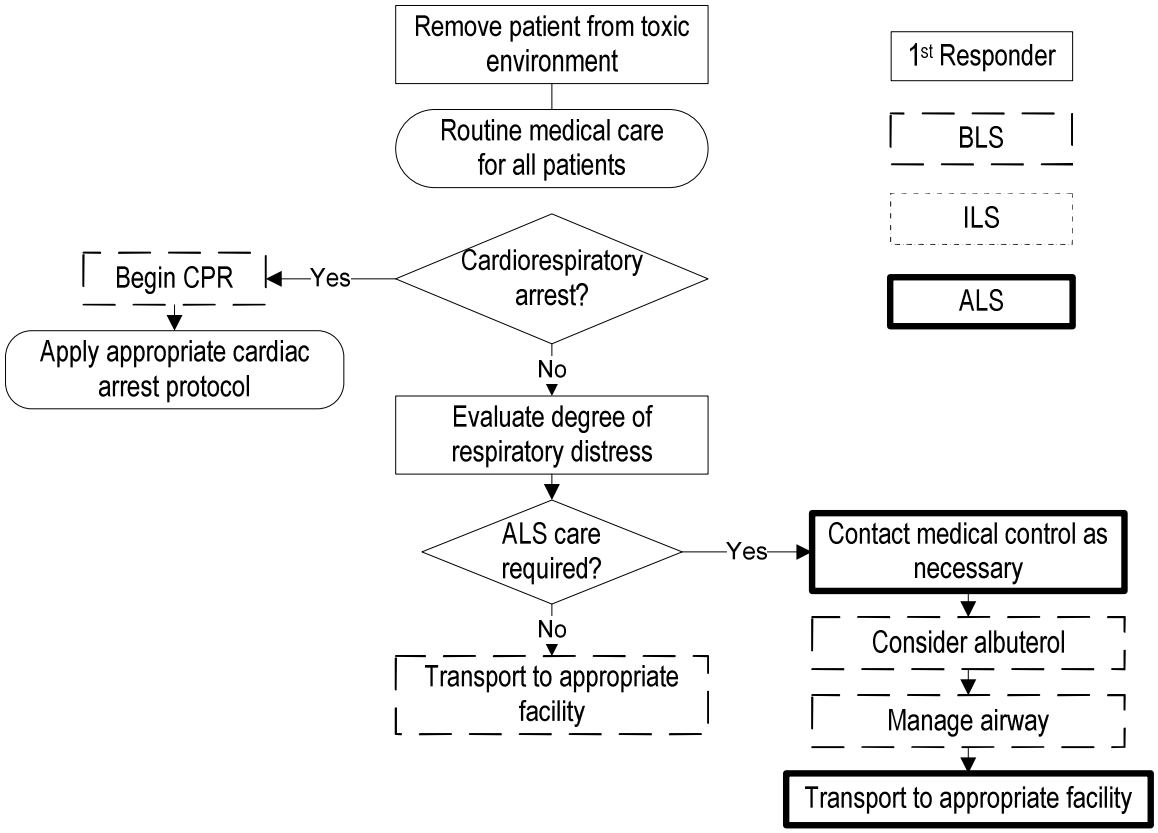


NOTES:

- Hypothermia is defined as a core temperature below 95°F or 35°C.
- Young and old patients are more susceptible to hypothermia.
- Shivering stops below 90°F or 32°C
- Temperatures below 88°F or 31°C often cause ventricular fibrillation, which rarely responds to defibrillation. Hypothermic patients should be handled gently in an attempt to avoid this.
- Hypothermia may cause severe bradycardia. Pulses should be palpated for one full minute.

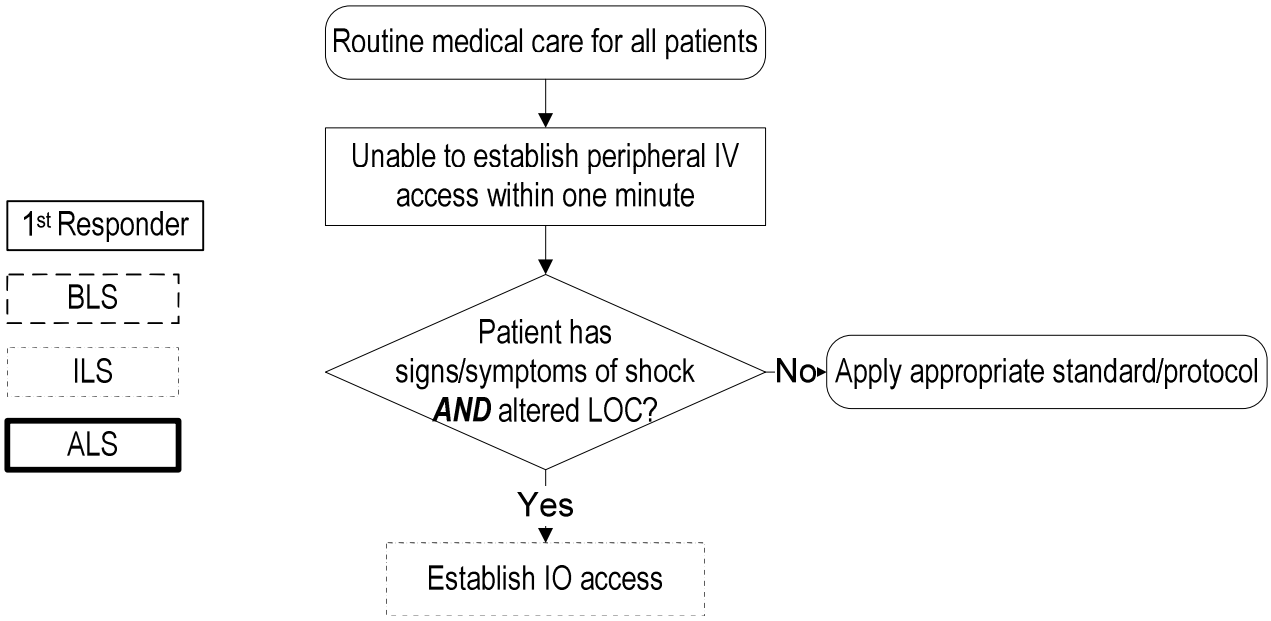
Initiated: 9/92	**MILWAUKEE COUNTY EMS STANDARD OF CARE**	Approved by: Ronald Pirrallo, MD, MHSA
Reviewed/revised: 7/1/11	**INHALATION INJURY**	
Revision: 5		Page 1 of 1

History:	Signs/Symptoms:	Working Assessment:
History of exposure to smoke or chemicals	Burns to face, chest or mouth Carbonaceous sputum Singed nasal hair Dyspnea Altered level of consciousness	Inhalation injury



NOTES:

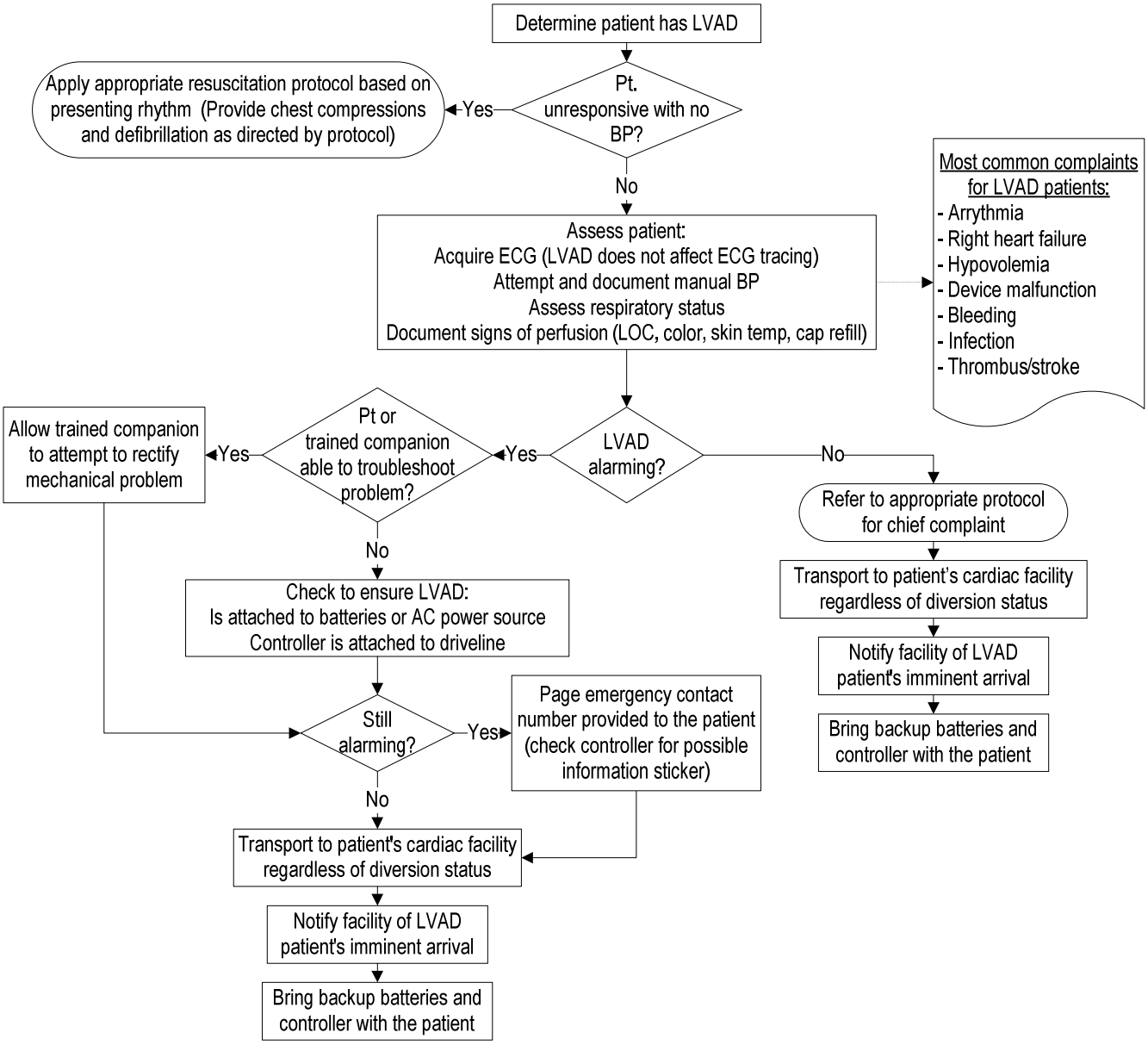
- Adult patients (≥ 8 years old) who suffered burns with an inhalation injury are to be transported to the Burn Center.
- All patients with suspected CO poisoning with altered mental status and *without* associated burns or trauma should be transported to the closest hyperbaric chamber.
- Pediatric patients (< 8 years old) who suffered burns with an inhalation injury are to be transported to Children's Hospital of Wisconsin.
- Pediatric patients (<8 years old) with suspected inhalation burn are to be transported to Children's Hospital of Wisconsin.



Notes:

- Inability to locate an appropriate vein site is equivalent to an attempt. It is not necessary to actually penetrate the skin with a needle *for this protocol only.*
- Contraindications to the use of the intraosseous route are major extremity trauma (fractured femur/tibia or evidence of internal/external thigh hemorrhage), and area of infection over the proposed insertion site (infected skin, abscess, etc.).
- The preferred order of route of administration for parenteral medications in immediate life-threatening situations is (due to effectiveness): peripheral IV, IO, chronic indwelling catheter with external port, ET.

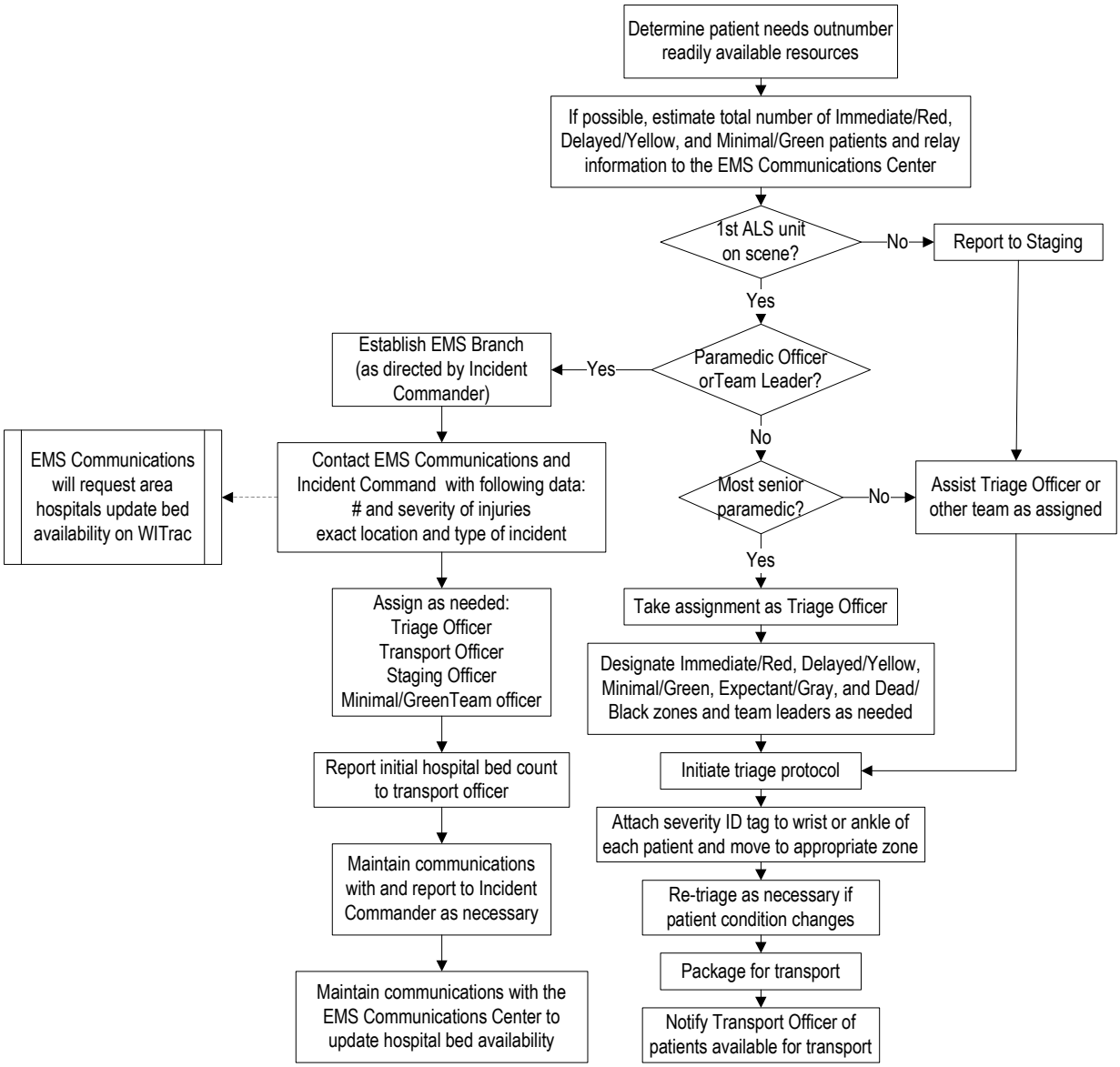
Initiated: 10/11/06	**MILWAUKEE COUNTY EMS STANDARD OF CARE**	Approved by: Ronald Pirrallo, MD, MHSA
Reviewed/revised: 7/1/11	**LEFT VENTRICULAR ASSIST DEVICES**	
Revision: 2		Page 1 of 1



NOTES:

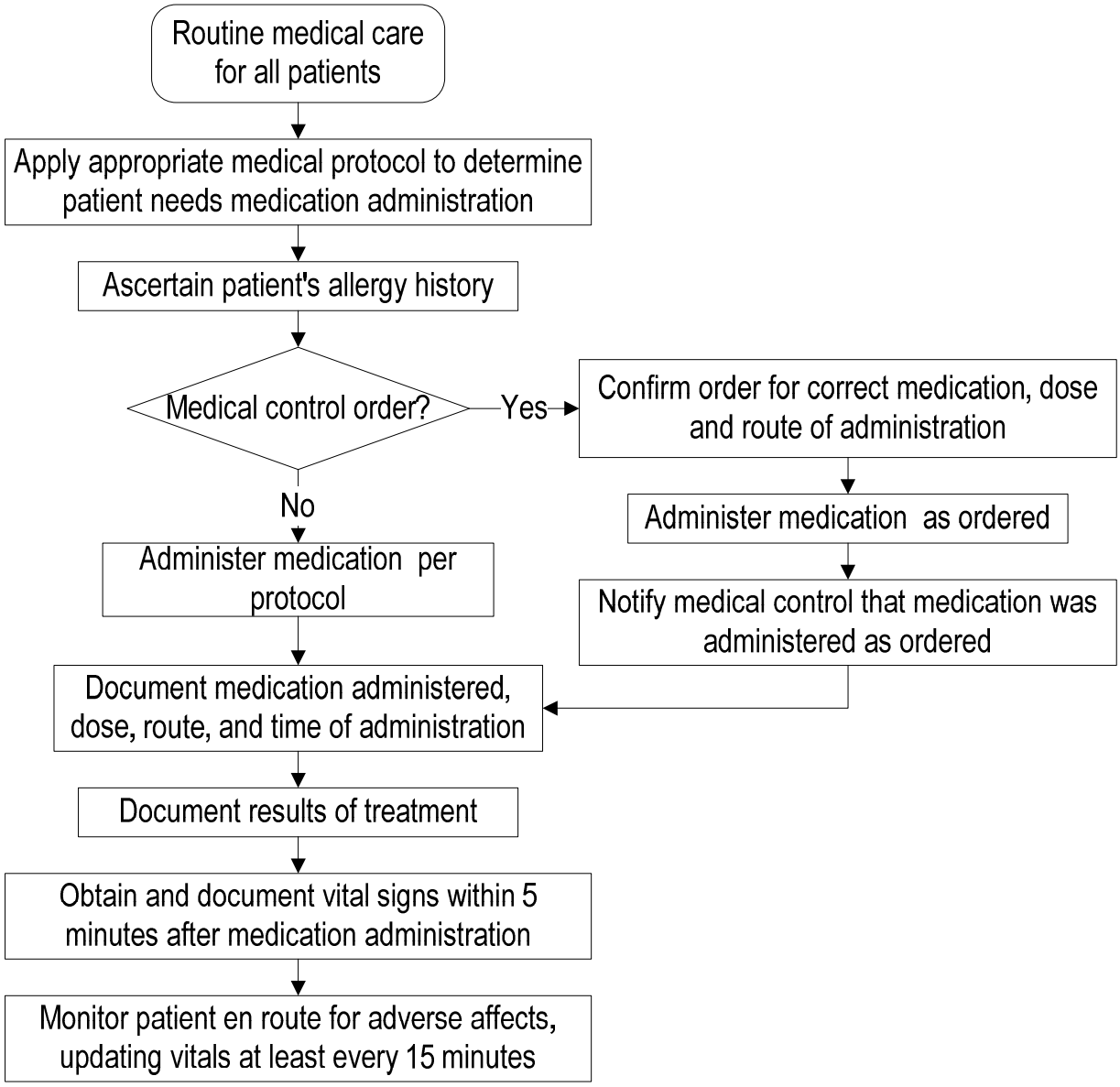
- Axial and Centrifugal Flow LVADs ***do not generally produce a palpable pulse in the patient.*** Assess for other signs of adequate perfusion (alert, warm skin, capillary refill).
- Axial and Centrifugal Flow LVADs produce very narrow pulse pressures (5 – 15 mm Hg). ***This is normal for the device!*** Use only manual blood pressure cuffs on these patients and don't be concerned if you can't detect a blood pressure.
    - When assessing blood pressure, you may only hear one change in sound. Document this as the systolic BP. Mean pressure should be 60 – 90 mm Hg.
- ***Unless the patient requires treatment for major trauma or burns, the closest appropriate facility is the patient's cardiac hospital, regardless of diversion status. If the patient receives cardiac care outside the Milwaukee area, the default receiving hospital is St. Luke's – Main Campus.*** Be sure to inform the receiving hospital the patient en route has a LVAD.

Initiated: 12/10/82	**MILWAUKEE COUNTY EMS STANDARD OF CARE**	Approved by: Ronald Pirrallo, MD, MHSA
Reviewed/revised: 7/1/11		
Revision: 7	**MASS CASUALTY TRIAGE**	Page 1 of 1



NOTES:

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



NOTES:

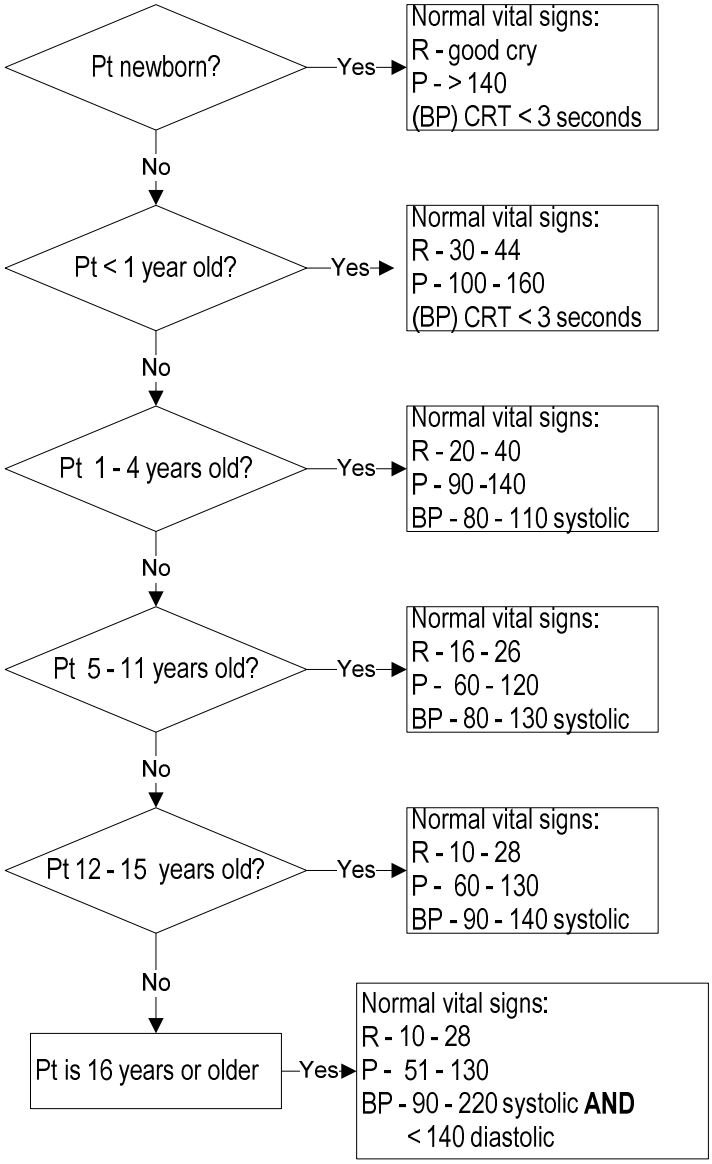
- Any medication order inconsistent with the usual dose should be questioned and discussed with medical control prior to administration.

- The patient's gag reflex must be present, and the patient must be cooperative, understand and be able to follow instructions for all oral medication administration.

MEDICATION	USUAL ADULT DOSE	USUAL PEDS DOSE	MONITOR, REPORT, DOCUMENT	CONTRAINDICATIONS
Adenosine 12 mg in 4 mL Prefilled syringe	12 mg rapid IV/IO	1st dose - 0.1 mg/kg 2nd dose - 0.2 mg/kg Max dose 12 mg	Continuous ECG Attempt to record conversion	Heart block Heart transplant Resuscitated PNB
Albuterol (Ventolin) 2.5 mg in 3 mL Unit dose	2.5 mg in 3 mL, nebulized *Do not dilute*	2.5 mg in 3 mL, nebulized *Do not dilute*	Patients with cardiac history over the age of 60 will have ECG monitoring during administration Heart rate Change in respiratory status	Heart rate >180
Amiodarone (Cordarone) 150 mg in 3 mL Carpuject	300 mg IV/IO bolus *for cardiac arrest only* 150 mg add to 100 mL D5W, IV/IO, run over 10 minutes	5mg/kg IV/IO bolus *for cardiac arrest only* 5mg/kg add to 100 mL D5W, IV, run over 10 Minutes Max dose 300 mg	ECG changes	2nd or 3rd degree AV block, Bradycardia **Not** to be administered via ETT
Aspirin 81 mg Chewable tablet	324 mg - 4 tablets, chew and swallow	N/A	N/A	Allergy Pregnancy
Atropine 1mg in 10 mL Prefilled	0.5 - 1 mg IV/IO 2 mg ET 2 - 5 mg IV for organophosphate poisoning Max dose 0.04 mg/kg Minimum dose 0.1 mg	0.02 mg/kg Max dose 1 mg Minimum dose 0.1 mg	Heart rate before and after administration; BP within 5 minutes of administration; ECG changes	Tachycardia
Calcium Chloride 1 g in 10 mL Prefilled	100 - 500 mg IV/IO bolus	20 mg/kg to a max of 500 mg per dose	ECG changes Watch carefully for infiltration	Ventricular fibrillation Ventricular tachycardia
D5 in Water 100 mL bag	Used to dilute amiodarone, lidocaine, sodium bicarbonate	Used to dilute dextrose and sodium bicarbonate	Monitor for infiltration Monitor pediatric blood glucose levels	None

MEDICATION	USUAL ADULT DOSE	USUAL PEDS DOSE	MONITOR, REPORT, DOCUMENT	CONTRAINDICATIONS
Dextrose 25 g in 50 mL Prefilled	25 g IV bolus or swallowed *IO in cardiac arrest*	500 mg/kg (1 ml/kg) to a max of 25 g/dose Dilute 1:1 with D5W for patient < 100 lbs (45 kg)	Changes in level of consciousness Repeat blood sugar determination Watch carefully for infiltration	If hypoglycemic, no contraindications
Diazepam Autoinjector Diazepam 10 mg/2 mL	10 mg IM	N/A	Change in seizure activity	No seizure activity
Diphenhydramine (Benadryl) 50 mg in 1 mL, 25 mg pills	25 – 50 mg IV/IO, IM, oral	1 mg/kg < 20kg Max dose 25 mg	Changes in level of consciousness	Presence of a self-administered CNS depressant
Dopamine 200 mg in 250 mL Premixed IV	2 – 20 mcg/kg/min IV/IO drip premixed bag	2 – 20 mcg/kg/min IV drip premixed bag	ECG changes Headache Watch carefully for infiltration	Hypovolemic shock Ventricular fibrillation, Ventricular tachycardia or PVCs
DuoDote Kit Atropine 2.1 mg/0.7 mL Pralidoxine 600 mg/2 mL Autoinjector	Atropine – 2 mg IM Pralidoxine – 600 mg IM	N/A	Change in symptoms Change in level of consciousness	Mild symptoms with no miosis
Epinephrine 1:1000 – 1 mg in 1 mL vial 1:10,000 1 mg in 10 mL Prefilled	1:1000: 0.01 mg/kg IM, or autoinjector Max single dose 0.3mg 1:10,000: 0.5 - 1 mg 2 mg ET	1:1000: 0.01 mg/kg IM, or 0.15 mg autoinjector; max 0.3 mg 1:10,000 IV/IO - 0.01 mg/kg or ET 0.1 mg/kg of 1:1000 Max dose 1 mg	Breath sounds and vital signs within 5 minutes of administration Effect on heart rate ECG changes	No absolute contraindications in a life-threatening situation Use caution when administering to patient with hypertension or coronary artery disease
Fentanyl 100 mcg/ 2 mL Carpuject/tubex	25 - 50 mcg IV/IO bolus, IM, IN Max dose 100 mcg	0.5 – 1mcg/kg Max dose 50 mcg	Change in pain level Changes in respiratory rate and effort	Respiratory depression GCS < 14 Hypotension

MEDICATION	USUAL ADULT DOSE	USUAL PEDS DOSE	MONITOR, REPORT, DOCUMENT	CONTRAINDICATIONS
Glucagon 1 mg with 1 mL diluting solution	1 mg IM injection	1 mg IM injection	Level of consciousness Repeat blood glucose determination	Known hypersensitivity Known pheochromocytoma
Glucose (oral) 15 g in 37.5 g Gel tube	15g swallowed	15g swallowed	Level of consciousness	Lack of gag reflex Patient unable to swallow
Lidocaine 100 mg in 5 mL Prefilled	1 - 1.5 mg/kg IV/IO bolus/ET Maintenance: 200 mg in 100 mL D5W run at 2 to 4 mg/min Max dose 3 mg/kg IV bolus	1mg/kg IV/IO bolus/ET Max dose 100 mg	ECG changes	Heart block Junctional arrhythmia Brady arrhythmia
Midazolam (Versed) 5 mg in 5 mL vial	1 - 2 mg IV/IO bolus, IM, rectally Max dose 4 mg	0.1mg/kg Max dose 3 mg	Changes in respiratory rate and effort Changes in level of consciousness and seizure activity	Hypotension Presence of a self-administered CNS depressant
Naloxone (Narcan) 2 mg in 2 mL Prefilled	2.0 mg IV/IO bolus, ET, IM	0.1 mg/kg Max dose 2 mg	Change in level of consciousness	Allergy
Nitroglycerine Metered spray Canister	0.4 mg sublingually metered spray	N/A	Blood pressure prior to and after administration Headache	Hypotension Use of Viagra-like medication (phosphodiesterase inhibitor) within last 48 hours
Normal Saline 1000 mL, 250mL bags, 2mL carpuject	As needed for volume replacement or to administer medications	20 mL/kg fluid bolus	Label date and time set up assembled Document mL of fluid infused Blood pressure Monitor for infiltration Attempt to keep warm in extreme cold	Discard after 24 hours or if no longer sterile
Sodium Bicarbonate 50 mEq in 50 mL Prefilled	0.5 - 1 mEq/kg IV/IO bolus	1 mEq/kg dilute for infants 5 kg and less 1:1 with D5W	Change in level of consciousness ECG changes if given for tricyclic OD	Do not mix with epinephrine or dopamine

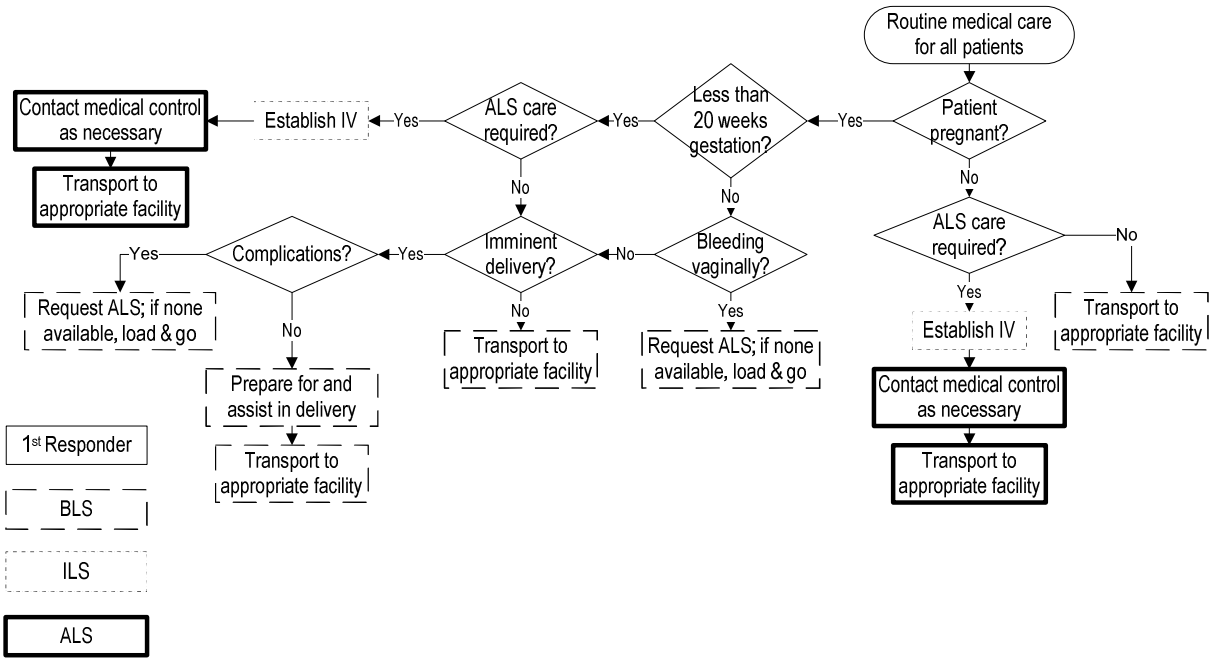


NOTES:

- Vital sign measurements include auscultating a blood pressure, palpating a pulse and counting respirations per minute.
- Pulse and respirations are to be counted for 15 seconds and the result multiplied by 4 for the rate/min with the exception of hypothermic patients. Pulse and respiratory rates are to be palpated and counted for one full minute in all patients suspected of being hypothermic.
- Normal room air oxygen saturation (pulse ox) is 94 – 100%

Initiated: 9/92	**MILWAUKEE COUNTY EMS STANDARD OF CARE**	Approved by: Ronald Pirrallo, MD, MHSA
Reviewed/revised: 7/1/11		
Revision: 6	**OB/GYN COMPLAINT**	Page 1 of 1

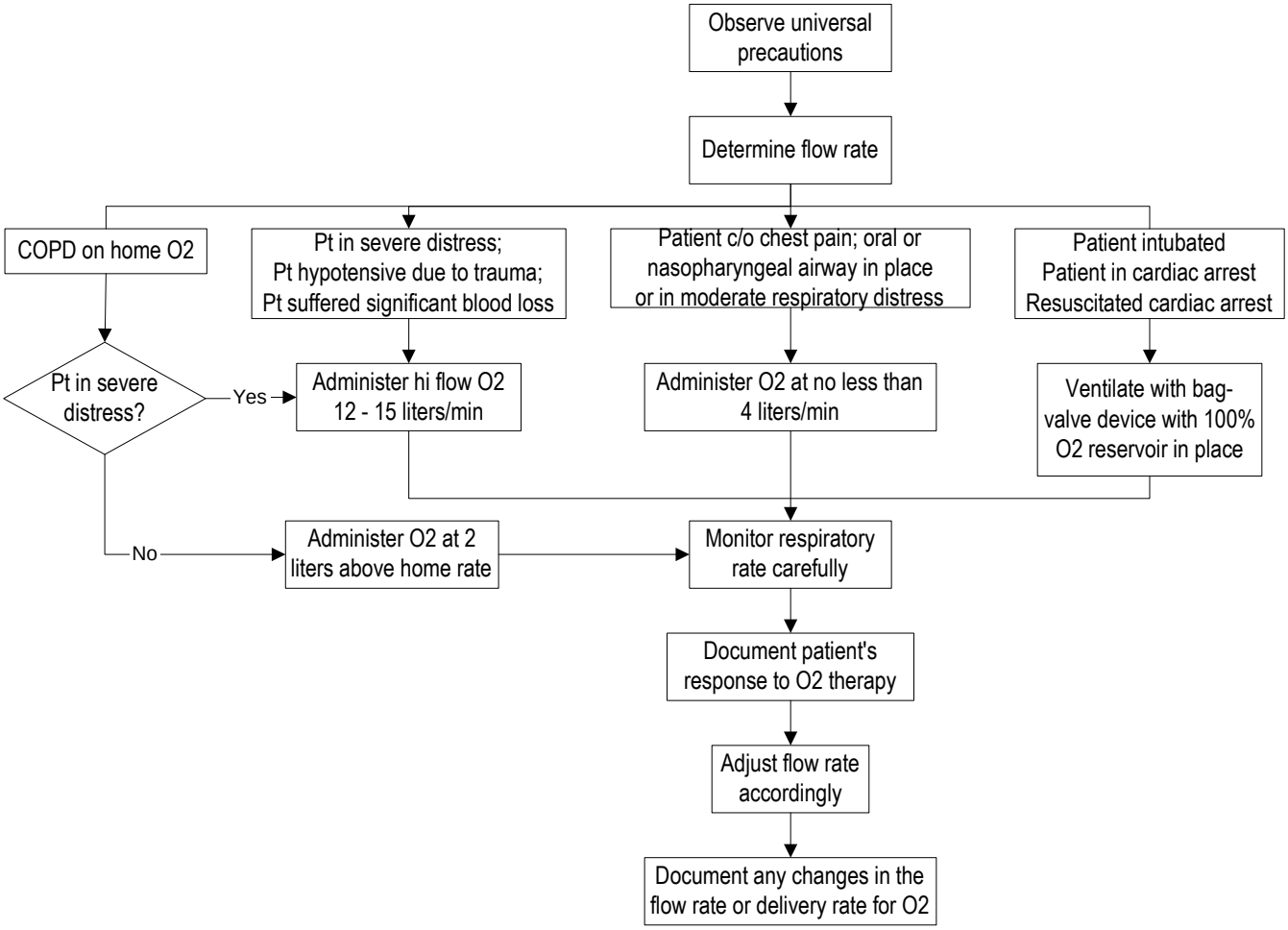
History:	**Signs/Symptoms:**	**Working Assessment:**
Pregnancy Due date Problems during pregnancy Prenatal care Previous obstetrical history	Vaginal bleeding, discharge Abdominal pain or cramping Contractions Ruptured membranes Crowning Hypertension with or without seizures	Vaginal bleed Placenta previa Abruptio placenta Spontaneous abortion Ectopic pregnancy Labor Eclampsia



NOTES:

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

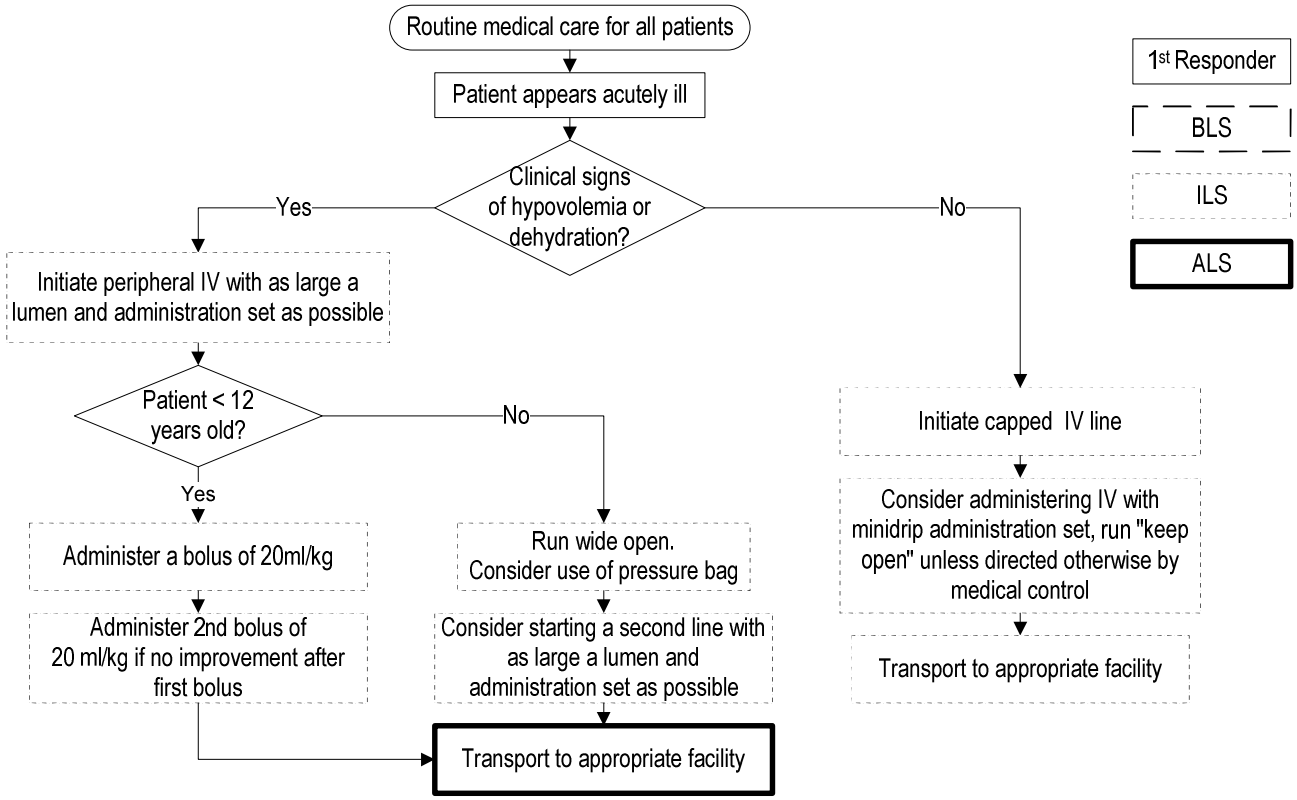
Initiated: 9/92	**MILWAUKEE COUNTY EMS STANDARD OF CARE**	Approved by: Ronald Pirrallo, MD, MHSA
Reviewed/revised: 7/1/11		
Revision: 2	**OXYGEN ADMINISTRATION**	Page 1 of 1



NOTES:

- Nasal cannula delivers 1 - 6 liters O2/minute delivering 25 - 40% concentration
- Non-rebreather mask delivers 12 liters O2/minute, delivering 90+% concentration
- Bag-valve device with O2 reservoir provides maximum flow rate for 100% concentration

Initiated: 12/10/82	**MILWAUKEE COUNTY EMS STANDARD OF CARE**	Approved by: Ronald Pirrallo, MD, MHSA
Reviewed/revised: 7/1/11	**PERIPHERAL IV LINES**	
Revision: 16		Page 1 of 1

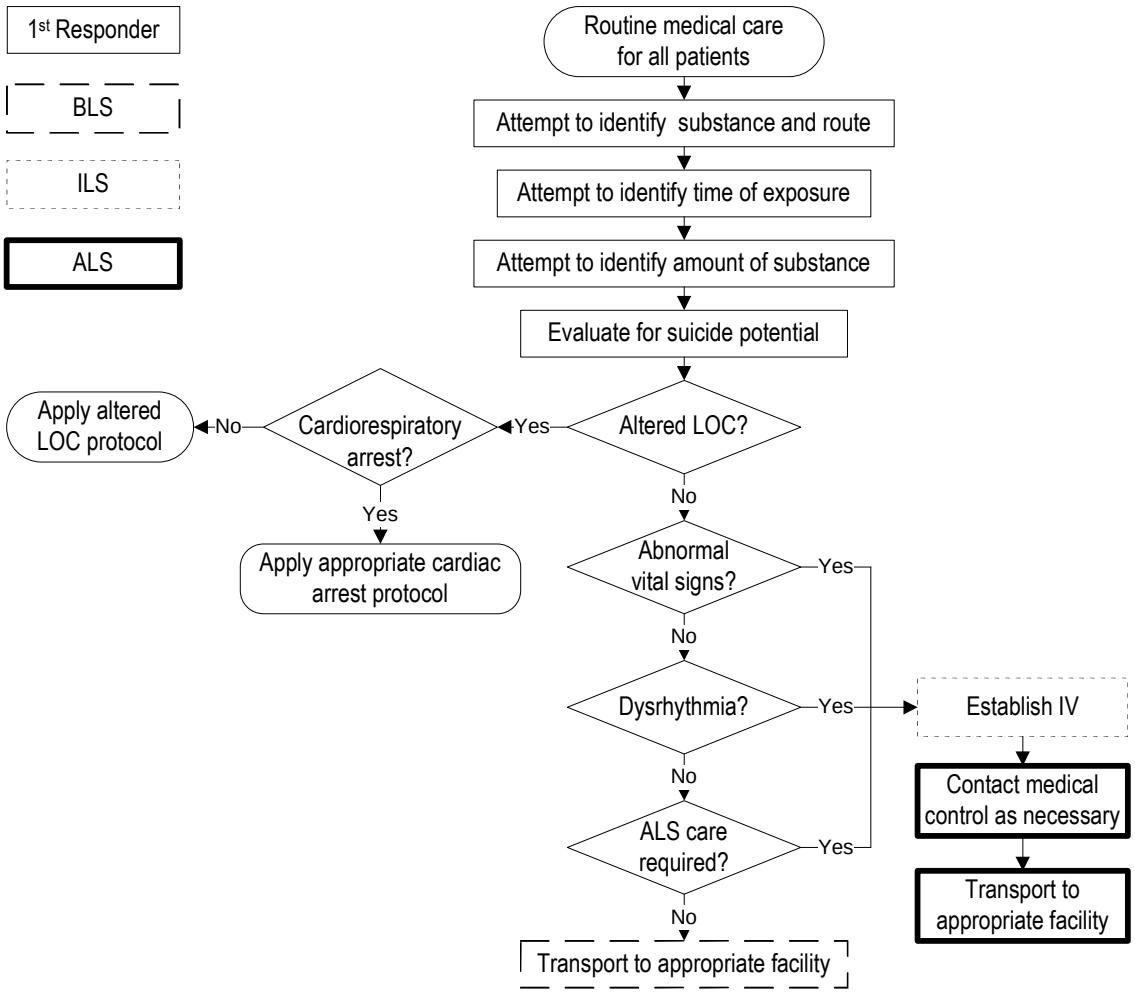


Notes:

- Providers may establish an intravenous infusion in patients who appear acutely ill, either for safety purposes during transport or prior to contact with medical control.
- The only acceptable IV initiation sites are the upper extremity, lower leg and external jugular. NO femoral or central lines are to be initiated by EMS personnel.
- The use of chronic indwelling IV catheter lines with external ports (i.e. Hickman, Arrow) may be used prior to contacting medical control in immediate life threatening situations when another site cannot be obtained.
- Renal dialysis shunts may only be used if the patient is in cardiopulmonary arrest and no other IV site is available.
- For non-life threatening situations, use of an indwelling IV catheter requires permission from medical control.
- When accessing any indwelling IV line or shunt, consider enlisting the expertise of medical personnel, if present.
- If the patient has a fistula, shunt, etc., avoid using that arm altogether for IV access, except in life threatening situations
- An intraosseous line may be established in a patient with sign/symptoms of shock ***AND*** altered level of consciousness in whom an intravenous line cannot be initiated.
- The preferred order for administration of parenteral medications is: peripheral IV, IO, chronic indwelling catheter with external port, ET.

Initiated: 9/92	**MILWAUKEE COUNTY EMS STANDARD OF CARE**	Approved by: Ronald Pirrallo, MD, MHSA
Reviewed/revised: 7/1/11		
Revision: 3	**POISON/OVERDOSE**	Page 1 of 1

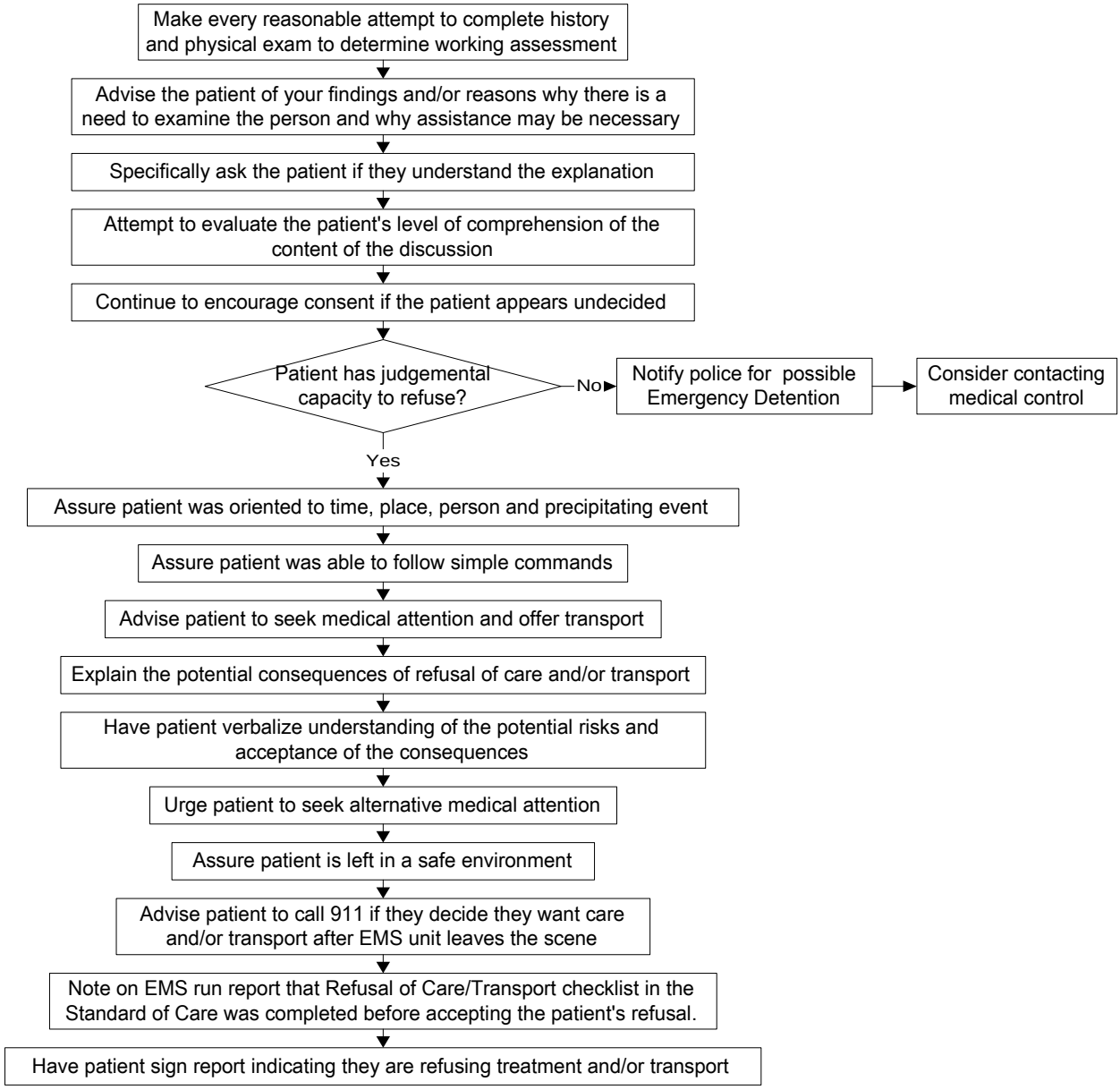
History:	Signs/Symptoms:	Working Assessment:
Ingestion or suspected ingestion of a potentially toxic substance History of drug/substance abuse Evidence of drug paraphernalia at scene Empty pill bottles at scene History of suicide attempts	Altered level of consciousness Hypotension/hypertension Behavioral changes Abnormal vital signs Dysrhythmia Seizure Chest pain	Overdose Toxic ingestion



NOTES:

- Patients with a history of cocaine use within the past 24 hours, complaining of chest pain are to be treated as cardiac patients.
- Patients who ingested tricyclic antidepressants, regardless of the number and present signs and symptoms, are to be transported by ALS unit. (These patients may have a rapid progression from alert mental status to death.)
- Pill bottles with the remaining contents should be brought to the ED with the patient whenever possible.

REFUSAL OF MEDICAL CARE AND/OR TRANSPORT



NOTES:

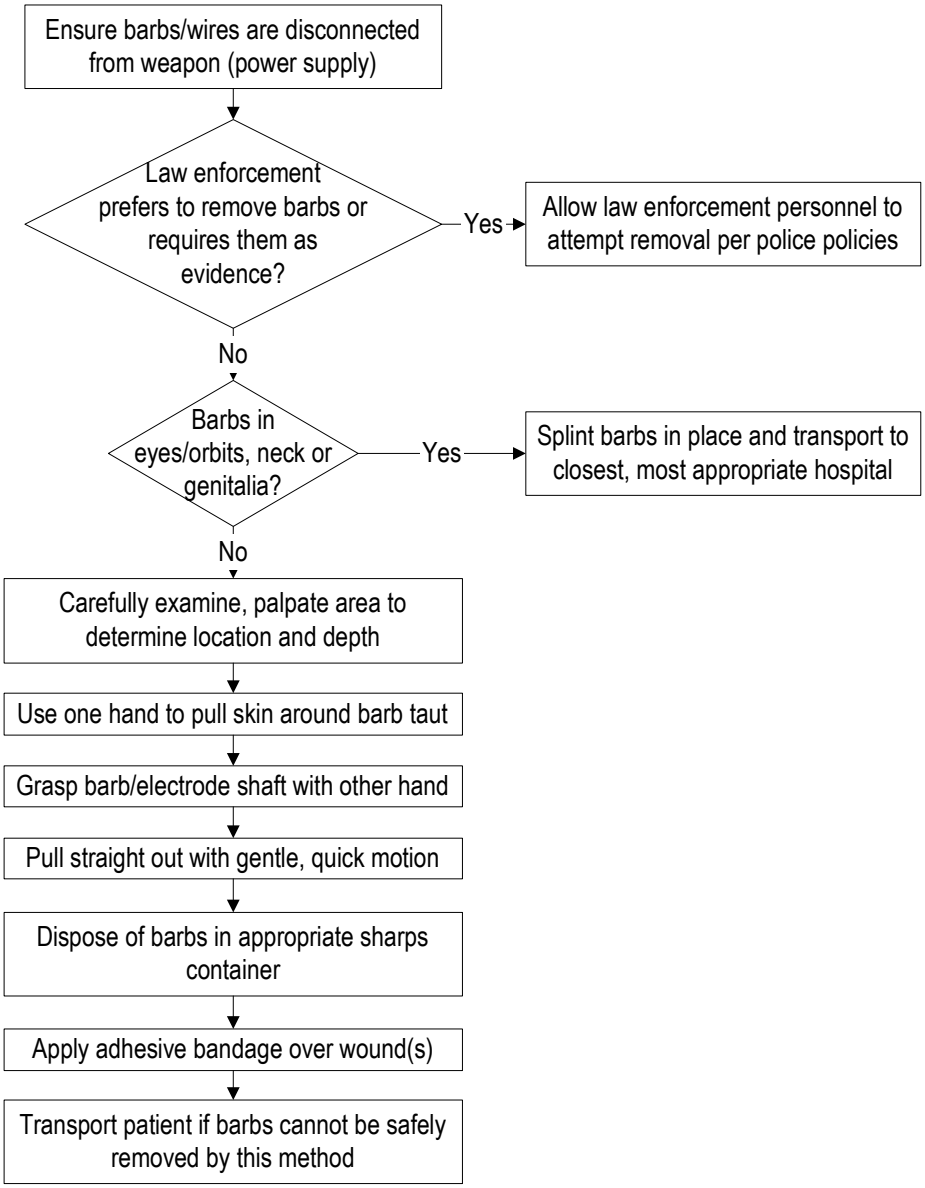
- If the patient is a non-emancipated minor and no symptoms that a prudent layperson, possessing an average knowledge of health and medicine, could reasonably expect to result in serious impairment to the patient's health exist:
  - A parent, guardian or individual responsible for the well being of a non-emancipated minor may refuse medical care and/or transport on the behalf of the patient.
  - If no parent, guardian or responsible party is present at the scene, the non-emancipated minor may refuse care and/or transport, if they have the capacity to refuse as defined above. A reasonable attempt should be made to contact the parent or guardian.

Initiated: 2/13/08
Reviewed/revised: 7/1/11
Revision: 1

MILWAUKEE COUNTY EMS STANDARD OF CARE

REMOVAL OF CONDUCTED ENERGY DEVICE BARBS

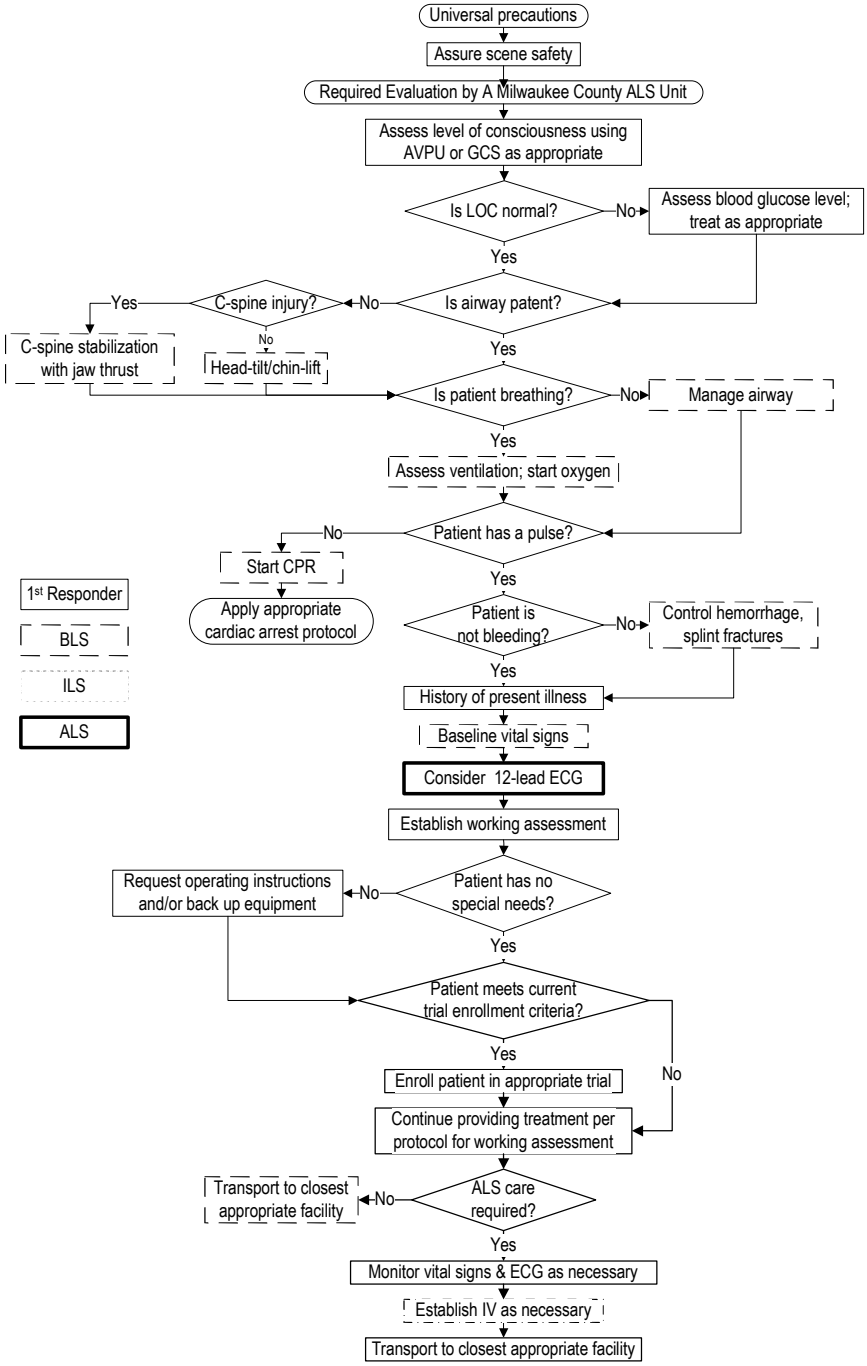
Approved by: Ronald Pirrallo, MD, MHSA
Page 1 of 1



Notes:

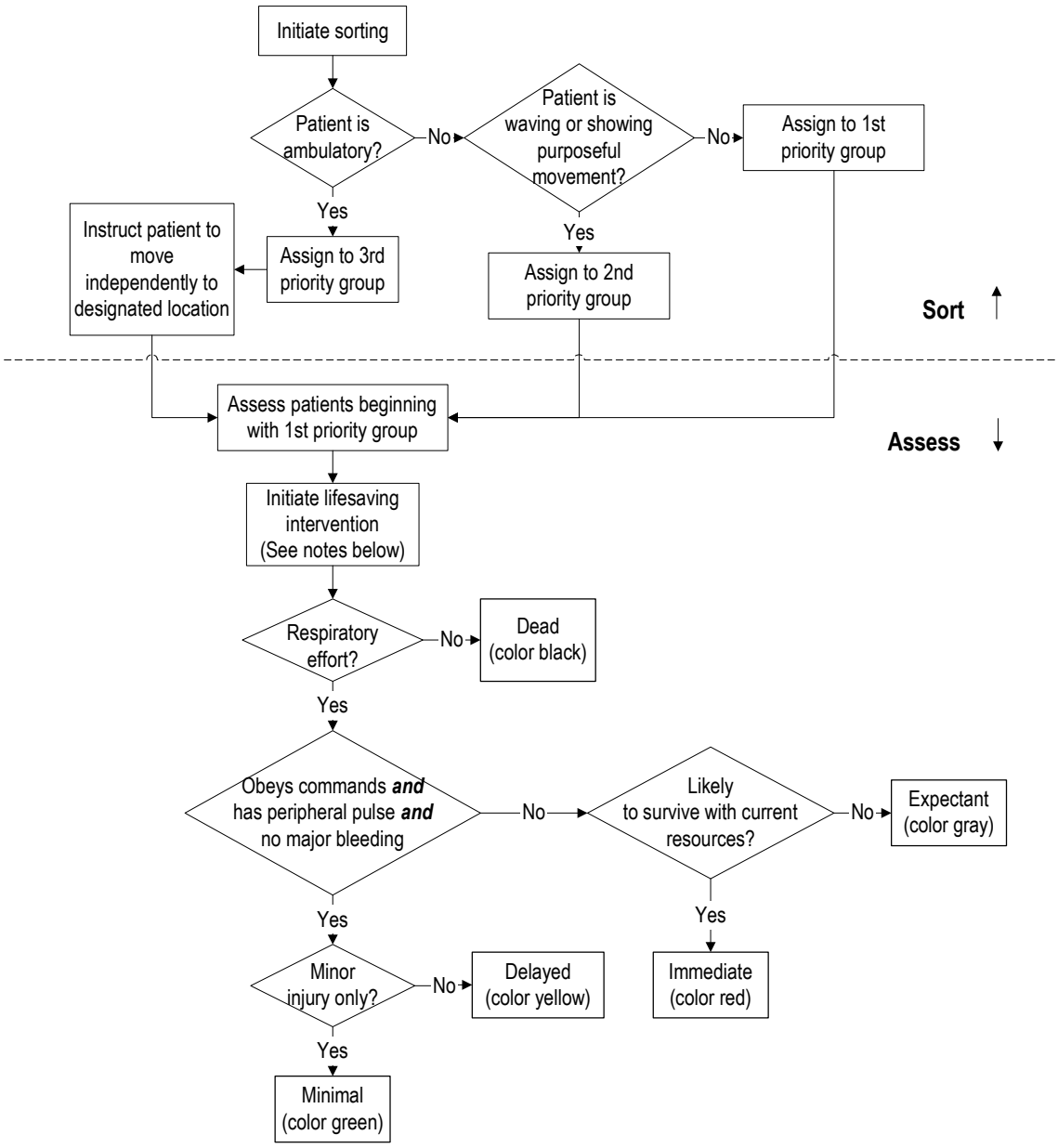
- Most conducted energy device barbs have a small bent hook similar to the barbs on a fishhook.
- On most occasions, the conducted energy weapon will cauterize the skin at the site of penetration. Bleeding is usually minimal, and the wound will heal uneventfully.
- When grasping barbs, grasp the metal shaft of the electrode, and not the wires, which are fragile and will break easily. Take care not to grasp any exposed sharp ends.

Initiated: 7/94	**MILWAUKEE COUNTY EMS STANDARD OF CARE**	Approved by: Ronald Pirrallo, MD, MHSA
Reviewed/revised: 7/1/11	**ROUTINE MEDICAL CARE FOR ALL PATIENTS**	
Revision: 4		Page 1 of 1



Notes:

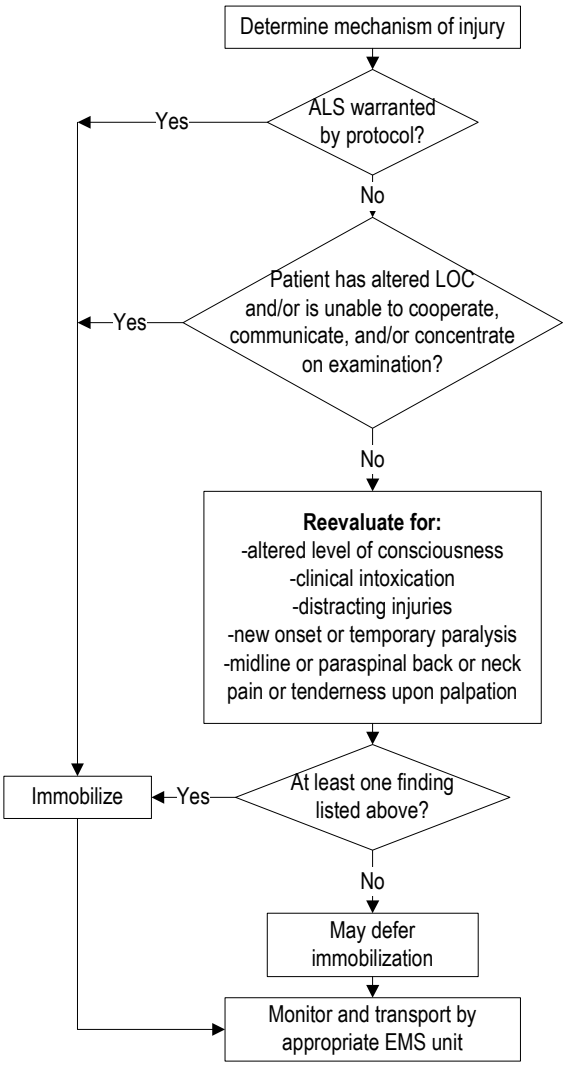
- A patient care report must be completed for each patient evaluated. A minimum of two complete sets of vital signs must be documented.
- The patient care report must be completed and left with/ faxed to the hospital prior to the MED unit going back into service.
- Refer to Response, Treatment and Transport and Transport Destination Policies for required level of transport and destination hospitals providing specialized care.
- The Primary Working Assessment, case number, and transport destination must be reported to EMS Communications for all patients receiving an ALS assessment.



NOTES:

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

With careful assessment, a patient who has sustained ***minor*** blunt trauma may not require spinal immobilization.

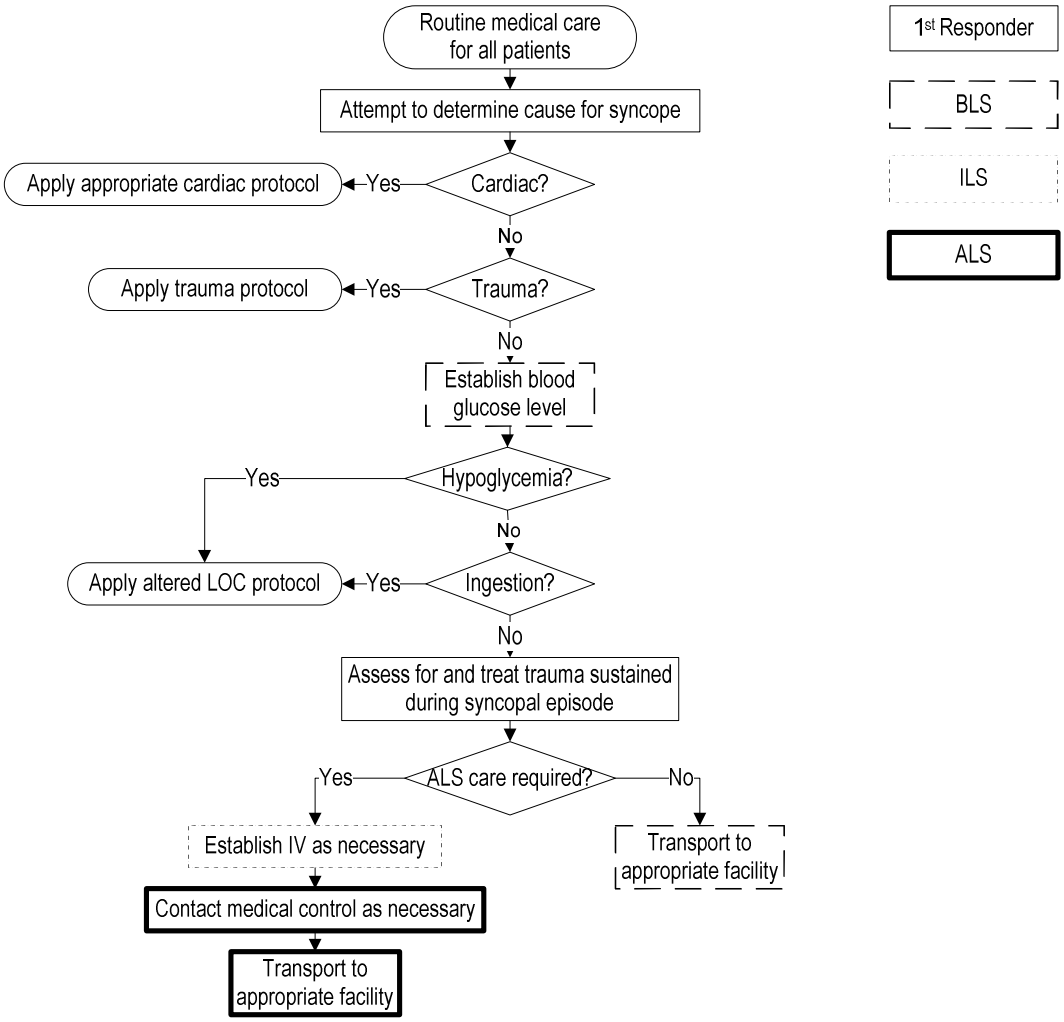


NOTES:

- This policy does not exclude any patient from immobilization if the EMS team feels c-spine/spinal immobilization precautions are warranted.
- Communication barriers include, but are not limited to: age, language, closed head injury, deafness, intoxication, or other injury that interferes with patient's ability to concentrate on or cooperate with the examination (i.e. patient is distracted), etc.
- Neck pain includes any stiffness or tenderness upon palpation at the posterior midline or paraspinal area of the cervical spine or back.
- It is important to determine whether the patient is unable to concentrate on exam due to other injuries, events, or issues (i.e. patient is distracted). Other injuries may actually serve as markers for high-energy trauma that could result in multiple other significant injuries, including cervical spine injuries. Distracting injuries include, but are not limited to: fractures, lacerations, burns, and crush injuries.
- Documentation on the run report should reflect negative physical findings as outlined above.

Initiated: 9/92	**MILWAUKEE COUNTY EMS STANDARD OF CARE**	Approved by: Ronald Pirrallo, MD, MHSA
Reviewed/revised: 7/1/11		
Revision: 6	**SYNCOPE**	Page 1 of 1

History:	Signs/Symptoms:	Working Assessment:
Brief loss of consciousness History of cardiac disease, stroke, seizures, diabetes Possible occult blood loss (ulcers, ectopic pregnancy) Fluid loss - diarrhea, vomiting Fever Vagal stimulation Trauma	Loss of consciousness with recovery Dizziness, lightheadedness Palpitations Abnormal pulse rate Irregular pulse Hypotension Signs of trauma	Consider underlying cause: Cardiac Hypovolemia Stroke Hypoglycemia Orthostatic hypotension Seizure Vasovagal Ingestion Trauma Aortic aneurysm/dissection

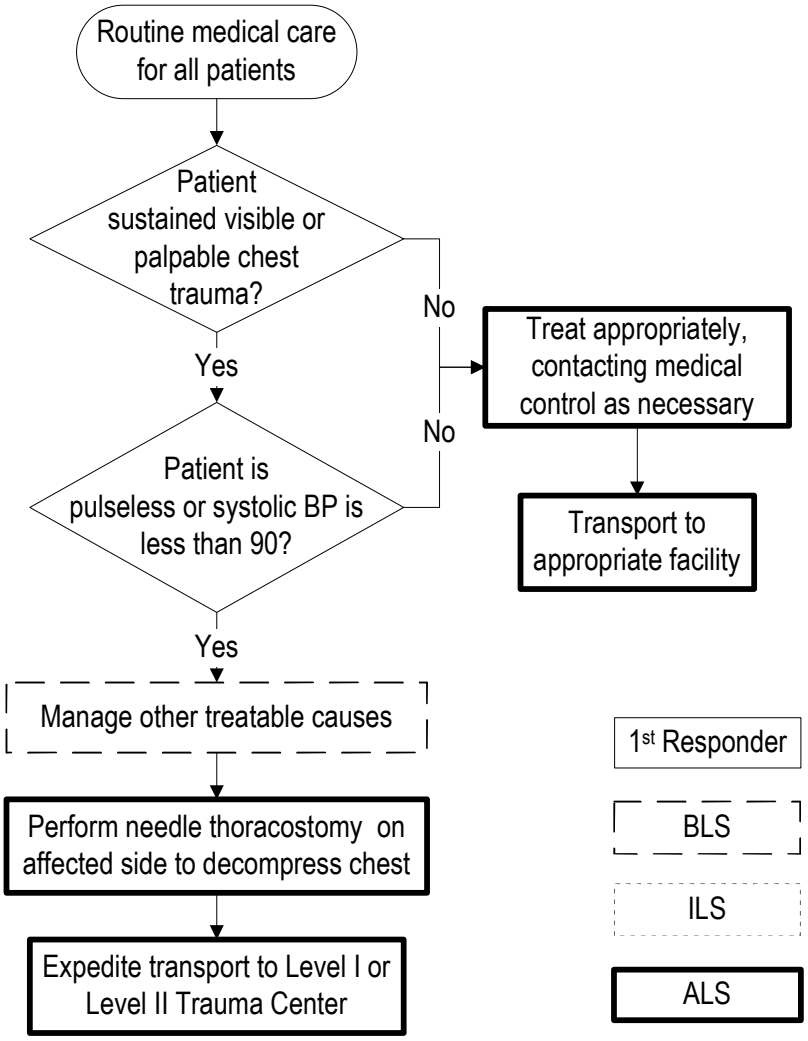


NOTES:

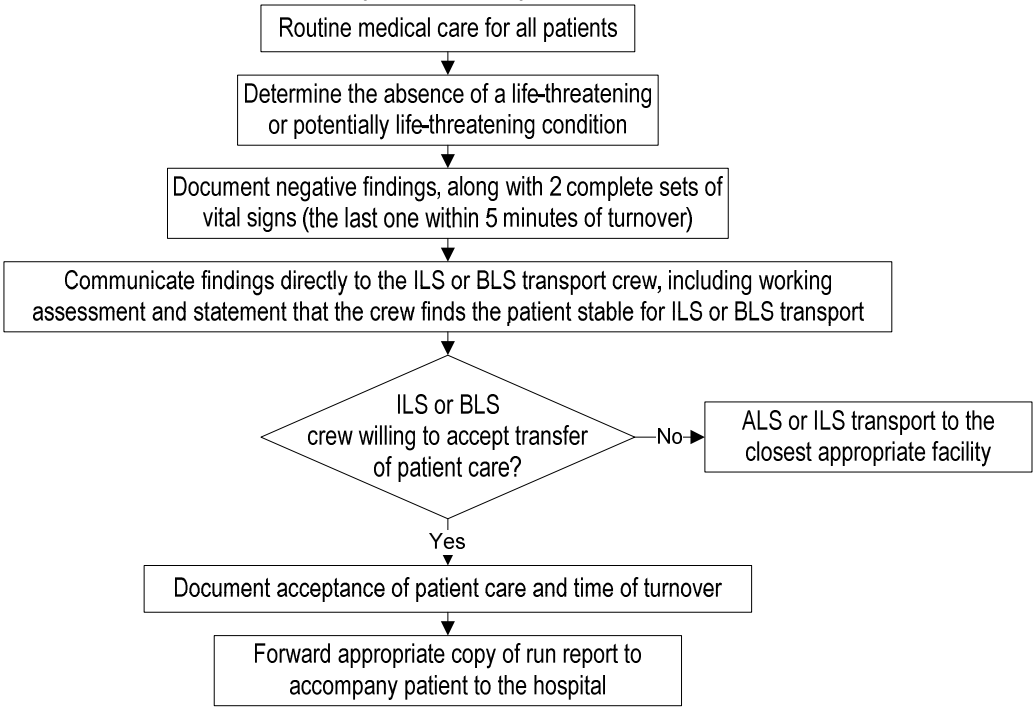
- Assess for signs and symptoms of trauma if associated or questionable fall with syncope.
- Consider underlying cause for syncope and treat accordingly.
- Over 25% of geriatric syncope is due to cardiac dysrhythmia.

Initiated: 10/14/09	**MILWAUKEE COUNTY EMS STANDARD OF CARE**	Approved by: Ronald Pirrallo, MD, MHSA
Reviewed/revised: 7/1/11		
Revision: 1	**TENSION PNEUMOTHORAX**	Page 1 of 1

History	Signs/Symptoms	Working Assessment
Patient sustained chest trauma	Visible or palpable chest trauma Severe respiratory distress Decreased or absent breath sounds on one side Hypotension Patient is pulseless Restlessness/agitation Increased resistance to ventilation Jugular vein distention Tracheal deviation away from affected side	Tension pneumothorax



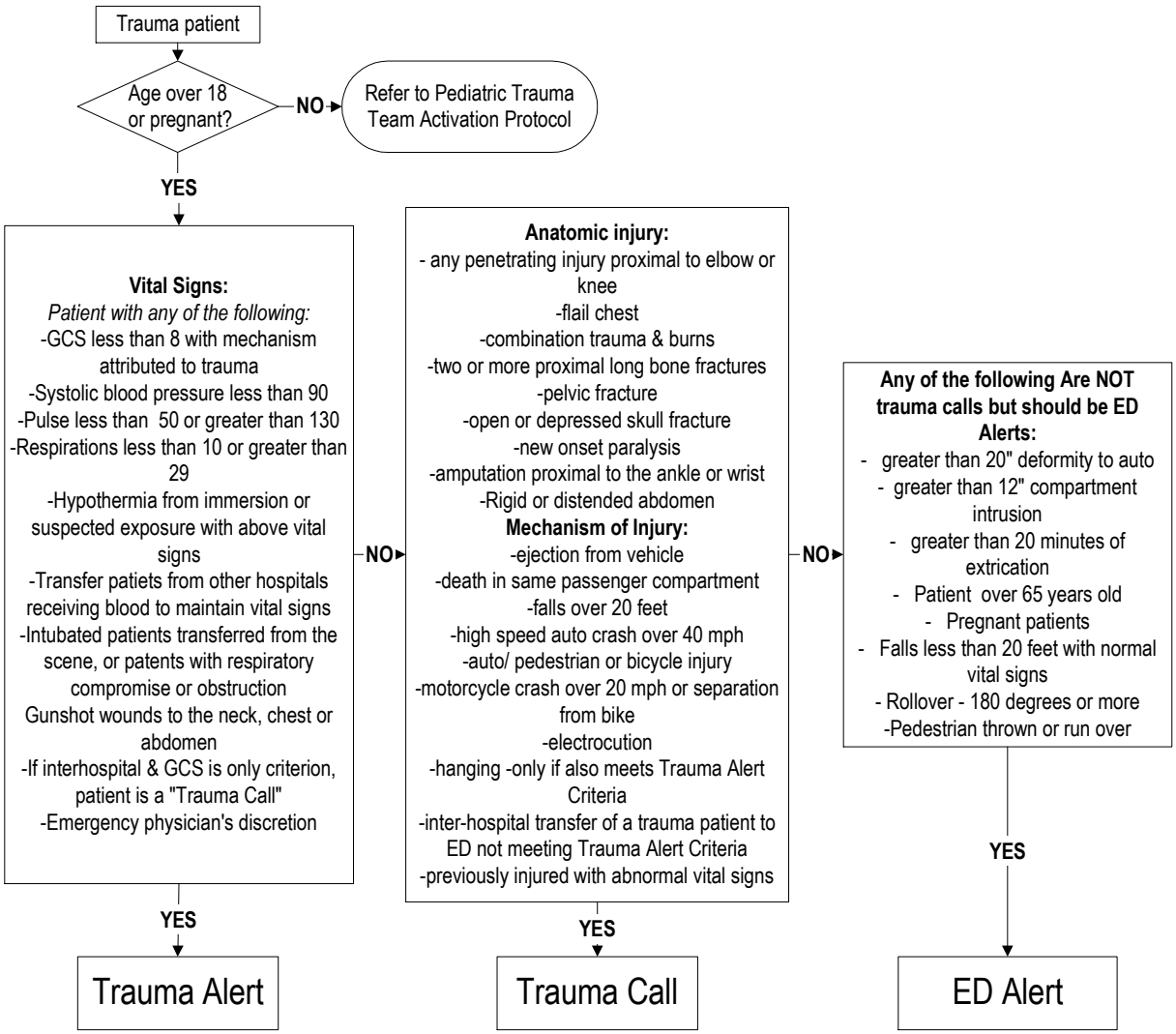
Initiated: 9/92	**MILWAUKEE COUNTY EMS STANDARD OF CARE**	Approved by: Ronald Pirrallo, MD, MHSA
Reviewed/revised: 7/1/11		
Revision: 8	**TRANSFER OF CARE (TURNDOWN)**	Page 1 of 1



NOTES:

- The decision to turn the patient over for BLS or ILS transport *must be unanimous* among the paramedic or ILS team.
- Patients who may not be turned over for BLS transport include, but are not limited to:
  - Patients who meet the major/multiple trauma criteria;
  - Patients with a complaint that includes chest pain or difficulty breathing, have a cardiac history who are taking 2 or more cardiac medications or have had an invasive cardiac procedure within the past 6 weeks;
  - Adults complaining of difficulty breathing with a history of cardiac or respiratory disease and/or sustained respiratory rate <8>28 with signs/symptoms of respiratory distress (poor aeration, inability to speak in full sentences, retractions, accessory muscle use, etc.);
  - Tricyclic overdoses;
  - Patients with abnormal vital signs and with associated symptoms;
  - Patients whose history or physical indicates a potentially life-threatening condition;
  - Patients with blood glucose levels >400 mg% and/or with signs/symptoms associated with diabetic ketoacidosis. ***BLS providers must request ALS for known blood sugar <70 mg/dl. ILS may treat blood sugar <70mg/dl.***
  - Any patient in the care of a medical professional who requests ALS transport;
  - Any patient assessed by a BLS unit who is unwilling to accept responsibility for transport;
  - Any patient in which EMT-Basic advanced skills were initiated; these patients require ALS transport:
    - Administration of albuterol ***without*** complete relief of symptoms (examples: wheezing, dyspnea)
    - Administration of aspirin
    - Administration of epinephrine ***without*** complete relief of symptoms (examples: wheezing, dyspnea, hypotension)
    - Assistance of self-administration of nitroglycerin
    - Administration of dextrose ***without*** complete relief of symptoms (example: altered level of consciousness after second dose of dextrose)
  - Any patient experiencing complications of pregnancy or childbirth.
  - Any infant with a reported incident of an Apparent Life Threatening Event (ALTE), regardless of the infant's current status.

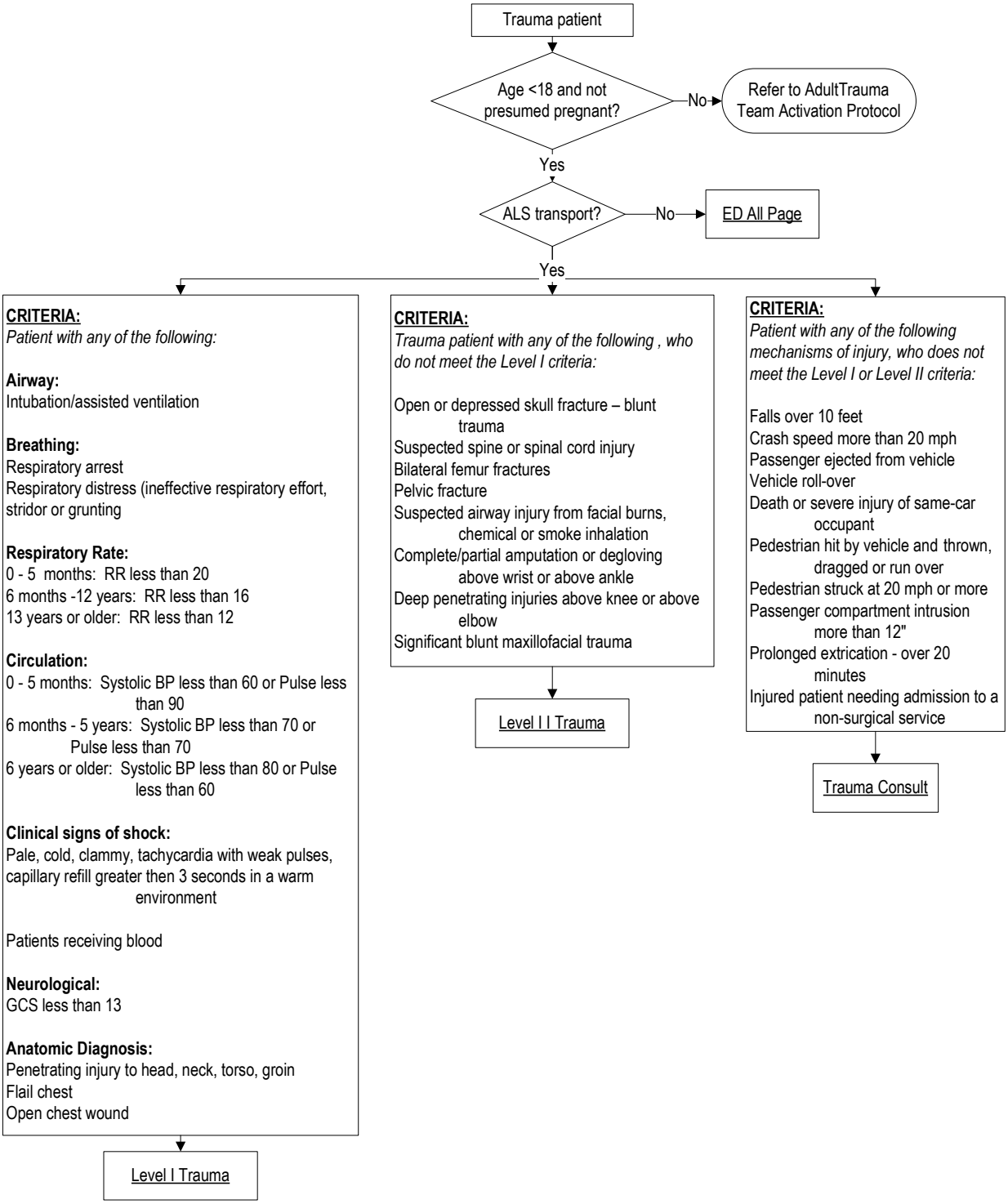
Initiated: 5/10/00	**MILWAUKEE COUNTY EMS STANDARD OF CARE**	Approved by: Ronald Pirrallo, MD, MHSA
Reviewed/revised: 7/1/11		
Revision: 8	**TRAUMA TEAM ACTIVATION - ADULT PATIENTS**	Page 1 of 1



NOTES:

- Paramedics should report to EMS Communications with the circumstances of the injury, estimated time of arrival and adequate information to facilitate Trauma Team activation
- If the patient's chief complaint appears to be related to a traumatic injury that occurred up to several days prior to the call, a Trauma Alert or Call is to be paged if the patient has abnormal vital signs. If the vital signs are normal, a routine page is appropriate.
- Information to be included in the Trauma Page: type of page (TA or TC), unit, age, sex, vital signs, mechanism of injury, interventions, and estimated time of arrival.
- **Trauma Alert** requires the presence of the Trauma Alert Team, consisting of: Trauma Surgery Faculty, Surgical Residents, Emergency Medicine Faculty, Emergency Medicine Residents, and Emergency Department Nurses
- **Trauma Call** requires the presence of the Trauma Call Team consisting of: Surgical Residents, Emergency Medicine Faculty, Emergency Medicine Residents, and Emergency Department Nurses
- **ED Alert** requires the presence of: Emergency Medicine Faculty, Emergency Medicine Resident and Emergency Department Nurse.

Initiated: 5/12/04	MILWAUKEE COUNTY EMS STANDARD OF CARE	Approved by: Ronald Pirrallo, MD, MHSA
Reviewed/revised: 7/1/11		
Revision: 2	**TRAUMA TEAM ACTIVATION - PEDIATRIC PATIENTS**	Page 1 of 1



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

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

Hand washing:

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

Disposal of contaminated sharps:

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

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