

	BLS Transport	ALS Fireline/ Tactical	ALS First Responder	ALS Transport
AIRWAY EQUIPMENT				
Airways:				
· Oropharyngeal (Sizes 0 – 6)	2 each	1 each	1 each	2 each
· Nasopharyngeal, soft rubber (sizes 14Fr., 18Fr., 22Fr., 26Fr., 28Fr., 30Fr., 32Fr., 34Fr., 36Fr.)	2 each	1 each	1 each	2 each
Atomizer for intranasal medication administration (MAD device)	2	2	2	3
Bite Stick	2	0	1	2
King Airway				
· Size 3	0	0	1	2
· Size 4	0	1	1	2
· Size 5	0	0	1	2
Continuous Positive Airway Pressure Device	0	0	(optional)	1
Intubation Equipment				
· Laryngoscope handle (battery powered)	0	1	1	1
· Additional batteries	0	0	2	2
· Blades (curved 1 - 4)	0	1 x #4	1 each	1 each
· Blades (straight 0 – 4)	0	1 x #4	1 each	1 each
· Bulbs (extra or disposable)	0	0	1	1
· Magill forceps (adult and pediatric)	0	0	1	1 each
· Endotracheal tubes sizes 6.0-8.0 mm: cuffed	0	Size 7.5 = 1	1 each	2 each
· Disposable stylets (adult)	0	1	1	2
· End-Tidal CO2 Detectors Adult – Colormetric OR Capnograph or digital (optional)	0	1	1	2
· Esophageal Detector Device (optional if Capnometer is utilized)	0	1	1	1
· Endotracheal Tube Introducer (ETTI)	0	1	1	2
· ET Tube Holder (adult)	0	0	1	2
· Meconium Aspirator	0	0	1	1
Videolaryngoscopy (adult)	0	0	optional	optional
Nebulizer				
· Hand-held OR Patient activated	0	0	1	2
· In-line nebulizer equipment with T-piece	0	0	1	2

	BLS Transport	ALS Fireline/ Tactical	ALS First Responder	ALS Transport
Oxygen Equipment and Supplies				
· Fixed tank in vehicle with regulator; M-tank or H-tank	1	0	0	1
· Regulator	1	0	1	1
· Portable tank (minimum D tank)	2	0	1	2
· Adult face masks: transparent, non-rebreathing; Child/infant: simple or non-rebreathing	4 each 2, 2	0	1 each	4 each 2,2
· Nasal cannulas (adult, child, infant)	4 each 2, 2	0	1 each	4 each 2,2
· Portable Pulse Oximetry	Optional	optional	Optional	1
Pleural Decompression kit: ≥14g needle, ≥2 ¼ inches long; Heimlich valve; occlusive dressing; 10 ml syringe	0	1	1	1
Resuscitation bag-valve-mask (BVM) Adult, pediatric, infant	1 each	1 adult	1 each	2,1,1
Suction Equipment and Supplies				
· Suction apparatus – Portable / battery powered	1	1 portable self contained unit	1 portable self contained unit	1
· Suction apparatus – Wall Mount	1	0	0	1
· Pharyngeal tonsil tip (rigid)	2	equivalent	equivalent	2
· Suction catheters: 6 Fr, 8 Fr, 10 Fr, 14 Fr, 16 Fr, 18 Fr	2 each	0	0	2 each
· Suction canister (spares)	2	0	0	2
· Suction tubing	2	0	0	2
DRESSING MATERIALS				
Bandages				
· Bulk non-sterile	1 box / pkg	0	0	1 box
· 4 x 4" sterile gauze pads	12	6	12	12
· 10 x 30" universal dressings	2	0	2	2
· ABD Pads	6	0	0	6
· 40" triangular bandage with safety pins	4	2	2	4
· Elastic bandage 3" (Ace)	2	2	2	2
· Occlusive dressing	4	2	2	4
* Hemostatic dressings (must be CA EMSA approved)	optional	optional	optional	optional
· Roller bandages (2", 3", 4", or 6")	6	2	3	6
Band-Aids (Assorted)	1 box	0	1 box	1 box
Burn Sheets (sterile) or commercial burn kit	2	2	2	2
Cold Packs / Hot Packs	4ea / 4ea	2 each	2 each	4ea / 4ea
Tape (1" and 2")	2 each	1" = 2 rolls	1 each	2 each
Trauma shears	1	1	1	1

	BLS Transport	ALS Fireline/ Tactical	ALS First Responder	ALS Transport
EQUIPMENT AND SUPPLIES				
Alcohol swabs	12	6	12	12
Bedpan OR Fracture Pan/Covered Urinal	1	0	0	1
Betadine swabs or solution	0	4	4	8
Blanket - disposable	2	2	1	2
Blood Pressure Cuffs (adult, large arm, thigh, pediatric, infant)	1 each	1 adult	1 x adult, thigh, pedi	1 each
Bulb Syringe	1	0	1	1
Drinking Water (one gallon)	1	0	0	1
Emesis basin/ disposable bag/ Covered waste container	2	0	1	2
EMS Field Manual Patient Care (8000) Series	1		1	1
Glucometer	1	1	1	1
Irrigation Equipment				
· Saline (sterile) 1000 ml	2	0	1	2
· Tubing for irrigation	2	0	1	2
Length based color-coded resuscitation tape (most current)	0	0	1	1
Lubricant, water soluble	4	0	4 packs	4 packs
Monitor/defibrillator equipment				
· Cardiac monitor – (portable) must have strip recorder, defibrillator/transcutaneous pacing ability for child / adult. May be biphasic or monophasic (biphasic preferred)	0	0	12-lead optional pacing	1
· ECG electrodes	0	0	0	1 box
· 12-lead ECG capability	0	0	0	1 set
· A.E.D.	1	1	1	0
OB Delivery				
· Separate and sterile kit includes: Towels, 4" x 4" dressing, umbilical tape or clamp, sterile scissors or other cutting utensil, bulb suction, sterile gloves, and blanket	1	0	1	1
· Thermal absorbent blanket and head cover, aluminum foil roll, or appropriate heat-reflective material (enough to cover newborn)	1	0	1	1
· Appropriate heat source for ambulance compartment	1	0	0	1
Pen Light	1	1	1	1
Sharps container	1	1	1	2
Sheet, pillow case, blanket, towel	4 each	0	0	4 each
Pillow	2	0	0	2 or equivalent
Stethoscope	1	1	1	1
Thermometer (with core temp capability)	Optional	0	0	1
Triage tags	20	6	20	20
Biohazard bags (large and small)	4 each	2 small	2 each	4 each
PPE kit (gloves, gown, booties, face shield, cap)	2 per person	0	1per person	2 per person
Disposable gloves S/M/L	Box	6 pair	Box	Box

	BLS Transport	ALS Fireline/ Tactical	ALS First Responder	ALS Transport
Face protection mask – N95 or P100	2 pp	0	1 pp	2 pp
Stair chair or equivalent	1	0	0	1
Scoop stretcher or breakaway flat	Optional	0	0	Optional
Road Flares or Equivalent (30 min)	6	0	0	6
Flashlight	1	0	0	1
Marin County Map	1	0	Optional	1
Vehicle Emergency Lights	Set	0	Optional	Set
MERA Radio	1	Optional	Optional	1
Company Radio	1	Optional	Optional	1
Spare Tire	1	0	Optional	1
Fire Extinguisher	1	0	Optional	1
IMMOBILIZATION and RESTRAINT DEVICES				
Cervical collars – adjustable Sizes to fit all patients over 1 yr old (adult/pedi)	4, 2	1	2, 1	4, 2
Head immobilization device	4	0	2	4
Pediatric Ambulance Transportation Devices	1	0	0	1
Spinal immobilization (radiolucent) backboard	2	0	1	2
· Strap system, adult	2	0	1	2
· K.E.D. or equivalent	1	0	0	1
Splints (vacuum/cardboard/equivalent)				
· Short, medium, long	2 each	1 moldable	1 each	2 each
Traction splint, adult / pediatric	1 each	0	0	1 each
Quick release synthetic soft restraints (or padded leather)	1	0	0	1
IV EQUIPMENT / SYRINGES / NEEDLES				
Arm board (Short)	0	0	1	2
Catheters – 1” long 14g, 16g, 18g, 20g, 22g, 24g	0	2 each	2 each	4 each
Intraosseous Equipment – adult and pedi				
· IO needles and/or mechanical device	0	0	optional	1
· Extra batteries if needed by model	0	0	0	1
Intravenous Solutions - 0.9% NL Saline				
· 100 cc bag	0	1000 cc total	1	2
· 1000 cc bag	0	0	2	6
Glucose Paste, 15 gm/ tube	2 tubes	2 tubes	2 tubes	2 tubes
Pressure Infusion Bags	0	0	0	1
Saline Lock	0	0	2	4
Syringes				
· 1 cc TB with removable needle	0	2	2	4
· 3 cc with 25 g x 5/8” needle	0	0	0	4
· 10 cc without needle	0	2	1	2
· filter needle	0	2	2	2
· 30 cc without needle	0	0	0	2

	BLS Transport	ALS Fireline/ Tactical	ALS First Responder	ALS Transport
Extension set (saline lock)	0	0	2	4
Constriction band	0	2	2	2
Three way stop cock	0	0	1	2
Tubing – with adjustable flow				
· macro drip (10gtt/cc – 15gtt/cc- adjustable)	0	2	2 each	4 each
· micro drip (60 micro gtts/cc)	0	0	1	2
- vented (for Acetaminophen IV admin)	0	optional	Optional	1
MEDICATIONS AND SOLUTIONS				
Acetaminophen (Tylenol/Ofirmev), 1000mg / 100ml	0	Optional	Optional	2
Adenosine, 6 mg in 2 ml NS	0	0	18 mg	36 mg
Albuterol Unit Dose	0	1 MDI w/Spacer	3	9
Amiodarone, 150 mg in 3 cc NS	0	3	3	6
ASA (chewable), 81 mg	1 bottle	1 bottle	1 bottle	1 bottle
Atropine, 1 mg in 10 ml	0	2	3	10
Calcium Chloride 10%, 1 gm in 10 ml	0	0	1	2
Check and Inject Kit (EMS Agency approved providers only)	2	0	0	0
CyanoKit (or hydroxocobalamin equivalent)	0	0	0	1
Dextrose 10%	0	0	1	2
Diphenhydramine, 50 mg/1ml	0	4	2	4
Duo-Dote (Nerve Gas Auto-injector)	See County policy			
Epinephrine 1 mg/1 ml (multidose)	0	4	1	2
Epinephrine 1 mg/10 ml	0	4	3	9
Glucagon, 1 mg	0	1 mg	1 mg	2 mg
Ipratropium (Atrovent), Unit Dose	0	0	1	4
Lidocaine 2% (20mg/ml)	0	0	0	2
Midazolam, 2 mg/2 ml	0	10	optional	4
Midazolam, 5 mg/1 ml	0	0	optional	optional
Morphine Sulfate, 10 mg/1 ml	0	6	optional	3
Naloxone (Narcan), 2 mg/ 5 ml	0	2	3	6
Narcan Nasal Spray	1 kit	0	0	0
Nitroglycerine, 0.4mg /tablet or spray	0	1 container	1 container	1 container
Ondansetron (Zofran) 4mg PO tablet	0	6	4	8
Ondansetron (Zofran) 4mg/2ml	0	0	1	4
Sodium Bicarbonate, 50 mEq/ 50 ml	0	0	1	2

	BLS Transport	ALS Fireline/ Tactical	ALS First Responder	ALS Non-transport	ALS Transport
AIRWAY EQUIPMENT					
Airways:					
· Oropharyngeal (Sizes 0 – 6)	2 each	1 each	1 each	1 each	2 each
· Nasopharyngeal (soft rubber) 14 Fr., 18 Fr., 22 Fr., 26 Fr., 28 Fr. 30 Fr., 32 Fr., 34Fr., 36Fr.	2 each	1 each	1 each	1 each	2 each
Atomizer for intranasal medication administration (MAD device)	0	0	1	1	3
Bite Stick	2	0	1	1	2
King Airway					
· Size 3	0		1	1	2
· Size 4	0	1	1	1	2
· Size 5	0		1	1	2
Continuous Positive Airway Pressure Device	0	0	(optional)	(optional)	1
Intubation Equipment					
· Laryngoscope handle (battery powered)		1	1	1	1
· Additional batteries		0	2	2	2
· Blades (curved 1 - 4)		1 x #4	1 each	1 each	1 each
· Blades (straight 0 – 4)		1 x #4	1 each	1 each	1 each
· Bulbs (extra or disposable)			1	1	1
· Magill forceps (adult and pediatric)			1	1 each	1 each
· Endotracheal tubes sizes 2.5-6.0 mm: cuffed and/or uncuffed sizes 6.0-8.0 mm: cuffed		Size 6 = 1 Size 7.5 = 1	1 each 1 each	1 each 1 each	2 each 2 each
· Disposable stylets (adult and pediatric)		1	1	1 each	2 each
· End-Tidal CO2 Detectors Adult – Colormetric Pediatric – Colormetric OR Capnograph or digital (optional)		Adult = 1	1 1 1	1 1 1	2 2 1
· Esophageal Detector Device (optional if Capnometer is utilized)		1	1	1	1
· Endotracheal Tube Introducer (ETTI)		1	1	1	2
· ET Tube Holder (adult and pediatric)			1	1 each	2 each
· Meconium Aspirator			1	1	1
Nebulizer					
· Hand-held OR Patient activated			1	1	2
· In-line nebulizer equipment with T-piece			1	1	2
Oxygen Equipment and Supplies					
· Fixed tank in vehicle with regulator; M-tank or H-tank	1		0	0	1
· Regulator	1		1	1	1
· Portable tank (minimum D tank)	1		1	1	2
· Adult face masks: transparent, non-rebreathing; Child/infant: simple or non-rebreathing	2 each		1 each	1 each	4 each 2,2
· Nasal cannulas (adult, child, infant)	4 each		1 each	1 each	4 each 2,2
· Portable Pulse Oximetry	Optional	optional	Optional	1	1
Pleural Decompression kit: ≥14g needle, ≥2 ¼ inches long; Heimlich valve; occlusive dressing; 10 ml syringe		1	1	1	1
Resuscitation bag-valve-mask (BVM) Adult, pediatric, infant	1 each	1 adult	1 each	1 each	2,1,1
Suction Equipment and Supplies					

· Suction apparatus – battery powered	1	1 portable self contained unit	1 portable self contained unit	1 portable self contained unit	1
· Suction apparatus – portable	1				1 x 1 fixed
· Pharyngeal tonsil tip (rigid)	2				2
· Suction catheters: 6 Fr, 8 Fr, 10 Fr, 14 Fr, 16 Fr, 18 Fr	2 each				2 each
· Suction canister (spares)	2				2
· Suction tubing	2				2
DRESSING MATERIALS					
Bandages					
· Bulk non-sterile	1 box / pkg	0	0	0	1 box
· 4 x 4" sterile gauze pads	12	6	12	12	12
· 10 x 30" universal dressings	2	0	2	2	2
· ABD Pads	6	0	0	0	6
· 40" triangular bandage with safety pins	4	2	2	4	4
· Elastic bandage 3" (Ace)	2	2	2	2	2
· Occlusive dressing	4	2	2	4	4
· Roller bandages (2", 3", 4", or 6")	6	2	3	6	6
Band-Aids (Assorted)	1 box	0	1 box	1 box	1 box
Burn Sheets (sterile) or commercial burn kit	2	2	2	2	2
Cold Packs / Hot Packs	2 each	2 each	2 each	2 each	8 cold/4 hot
Tape (1" and 2")	2 each	1" = 2 rolls	1 each	1 each	2 each
Trauma shears	1	1	1	1	1
EQUIPMENT AND SUPPLIES					
Alcohol swabs	12	6	12	12	12
Bedpan OR Fracture Pan/Covered Urinal	2	0	0	0	1
Betadine swabs or solution	0	4	4	4	8
Blanket - disposable	2	2	1	1	2
Blood Pressure Cuffs (adult, large arm, thigh, pediatric, infant)	1 each	1 adult	1 x adult, thigh, pedi	1 x adult, thigh, pedi	1 each
Bulb Syringe	1	0	1	1	1
Drinking Water (one gallon)	1				1
Emesis basin/ disposable bag/ Covered waste container	2	0	1	1	2
EMS Field Manual Patient Care (8000) Series	1		1	1	1
Glucometer	0	1	1	1	1
Irrigation Equipment					
· Saline (sterile) 1000 ml	2	0	1	1	2
· Tubing for irrigation	2	0	1	1	2
Length based color-coded resuscitation tape (most current)	0	0	1	1	1
Lubricant, water soluble	4	0	4 packs	4 packs	4 packs
Monitor/defibrillator equipment					
· Cardiac monitor – (portable) must have strip recorder, defibrillator/transcutaneous pacing ability for child / adult. May be biphasic or monophasic (biphasic preferred)	0	0	12-lead optional (pacing optional)	1	1
· ECG electrodes	0	0		1 box	1 box
· 12-lead ECG capability	0	0		1 set	1 set
· A.E.D.	1	1	1	0	0
OB Delivery					
· Separate and sterile kit includes: Towels, 4" x 4" dressing, umbilical tape or clamp, sterile scissors or other cutting utensil, bulb suction, sterile gloves, and blanket	1		1	1	1

· Thermal absorbent blanket and head cover, aluminum foil roll, or appropriate heat-reflective material (enough to cover newborn)	1		1	1	1
· Appropriate heat source for ambulance compartment	1		0	0	1
Pen Light	1	1	1	1	1
Sharps container	1	1	1	1	2
Sheet, pillow case, blanket, towel	4 each	0	0	0	4 each
Pillow	2	0	0	0	2 or equivalent
Stethoscope	1	1	1	1	1
Thermometer	Optional	0	0	0	1
Triage tags	20	6	20	20	20
Biohazard bags (large and small)	4 each	2 small	2 each	2 each	4 each
PPE kit (gloves, gown, booties, face shield, cap)	2 per person	0	1per person	1 per person	2 per person
Disposable gloves S/M/L	Box	6 pair	Box	Box	Box
Face protection mask – N95 or P100	2 pp	0	1 pp	1 pp	2 pp
Stair chair or equivalent	1	0	0	0	optional
Scoop stretcher or breakaway flat	Optional	0	0	0	Optional
Road Flares or Equivalent (30 min)	6	0	0	0	6
Flashlight	1	0	0	0	1
Marin County Map	1	0	Optional	Optional	1
Vehicle Emergency Lights	Set	0	Optional	Optional	Set
MERA Radio	1	Optional	Optional	Optional	1
Company Radio	1	Optional	Optional	Optional	0
Spare Tire	1	0	Optional	Optional	1
Fire Extinguisher	1	0	Optional	Optional	1
IMMOBILIZATION and RESTRAINT DEVICES					
Cervical collars – adjustable					
Sizes to fit all patients over 1 yr old (adult/pedi)	4, 2	1	2, 1	2, 1	4, 2
Head immobilization device	4	0	2	2	4
Spinal immobilization (radiolucent) backboard	2	0	1	1	2
· Strap system, adult	2		1	1	2
· K.E.D. or equivalent	1		0	0	1
Splints (vacuum/cardboard/equivalent)					
· Short, medium, long	2 each	1 moldable	1 each	1 each	2 each
Traction splint, adult / pediatric	1 each	0	0	0	1 each
Quick release synthetic soft restraints (or padded leather)	1	0	0	0	1
IV EQUIPMENT / SYRINGES / NEEDLES					
Arm board (Short)			1	1	2
Catheters – 1” long 14g, 16g, 18g, 20g, 22g, 24g		2 each	2 each	2 each	4 each
Intraosseous Equipment – adult and pedi					
· IO needles and/or mechanical device		0	optional	optional	1
· Extra batteries if needed by model					1
Intravenous Solutions - 0.9% NL Saline					
· 100 cc bag		1000 cc total	1	1	2
· 1000 cc bag			2	2	6
Glucose Paste, 15 gm/ tube	1	1 tube	1 tube	1 tube	2 tubes
Pressure Infusion Bags		0	0	0	1
Saline Lock		0	2	2	4
Syringes					
· 1 cc TB with removable needle		2	2	2	4

· 3 cc with 25 g x 5/8" needle	0			4
· 10 cc without needle	2	1	1	2
· filter needle	2	2	2	2
· 30 cc without needle	0	0	0	2
Extension set (saline lock)	0	2	2	4
Constriction band	0	2	2	2
Three way stop cock	0	0	1	2
Tubing – with adjustable flow				
· macro drip (10gtt/cc – 15gtt/cc- adjustable)	2	2 each	2 each	4 each
· micro drip (60 micro gtts/cc)	0	1	1	2
Inspected by: _____	DATE: _____			

MEDICATIONS AND SOLUTIONS					
Activated Charcoal, 25 gms		0	1 bottle	1 bottle	2 bottles
Adenosine, 6 mg in 2 ml NS		0	18 mg	18 mg	36 mg
Albuterol Unit Dose		1 MDI w/Spacer	3	3	9
Amiodarone, 150 mg in 3 cc NS		3	3	3	6
ASA (chewable), 81 mg		1	1 bottle	1 bottle	1 bottle
Atropine, 1 mg in 10 ml		2	3	3	10
Calcium Chloride 10%, 1 gm in 10 ml		0	1	1	2
Dextrose 10%		0	1	1	2
Dextrose 25%		0	1	1	2
Dextrose 50%, 25 gms/50 ml		1	1	1	2
Diphenhydramine, 50 mg/1ml		4	2	2	4
Dopamine (pre-mix), 400 mg/ 250 ml		0	1	1	1
Duo-Dote (Nerve Gas Auto-injector)	See County policy				
Epinephrine 1:1000, 1 mg/1 ml (multidose)		4	1	1	2
Epinephrine 1:10,000, 1 mg/10 ml		4	3	3	9
Glucagon, 1 mg		1 mg	1 mg	1 mg	2 mg
Ipratropium (Atrovent), Unit Dose		0	1	1	4
Lidocaine 2% (20mg/ml)		0	0	0	2
Midazolam, 2 mg/2 ml		3	optional	3	5
Midazolam, 5 mg/1 ml		0	optional	optional	optional
Morphine Sulfate, 10 mg/1 ml		6	optional	2	4
Naloxone (Narcan), 2 mg/ 5 ml		2	3	3	6
Nitroglycerine, 0.4mg /tablet or spray		1 container	1 container	1 container	1 container
Ondansetron (Zofran) 4mg PO tablet		6	4	4	8
Ondansetron (Zofran) 4mg/2ml		0	1	1	4
Sodium Bicarbonate, 50 mEq/ 50 ml		0	1	1	2

Inspected by: _____

DATE: _____

BRONCHOSPASM/ ASTHMA/ COPD

BLS

ALWAYS USE STANDARD PRECAUTIONS


INDICATION

- Acute or progressive shortness of breath, chest discomfort, wheezing, cyanosis

PHYSICIAN CONSULT

- ~~EpiPen for severe asthma~~
- Patients presenting with severe asthma
- Necessity for second EpiPen dose

TREATMENT

- BLS RMC
- Mild to moderate (alert, may be unable to speak full sentences, limited accessory muscle use)
 - Assist patient with own medication if available
-  Severe symptoms (altered mental status, minimal air movement, inability to speak, cyanosis)
 - EpiPen

SPECIAL CONSIDERATION

- Suspect carbon monoxide in cases of exposure to fire; do not rely on pulse oximetry in this setting

DOCUMENTATION - ESSENTIAL ELEMENTS

- Physical finding of wheezing, decreased lung sounds
- Administration of oxygen

RELATED POLICIES/ PROCEDURES

- Auto Injector EpiPen BLS PR 4

DETERMINATION OF DEATH - ALS

ALWAYS USE STANDARD PRECAUTIONS

INDICATION

Patient in cardiac arrest who does not meet criteria for BLS Determination of Death and does not have a valid DNR order.

PROCEDURE

- Confirm pulseless and apneic. Apply leads and document rhythm in two monitoring leads for one minute or in one lead if an AED is the only available monitor.
- Determination of death can be made prior to, or immediately after, initiating resuscitation when:
 - Medical (**ALL** must be present)
 - The presenting rhythm is asystole
 - Event was unwitnessed
 - Effective bystander CPR was not initiated, based on CPR guidelines/paramedic judgment
 - **No evidence of potentially reversible cause of arrest (e.g. hyperkalemia or hypothermia)**
 - No AED or manual shock delivered
 - Trauma (**EITHER** may be present)
 - MCI incident where triage principles preclude initiation of CPR
 - Blunt, penetrating or profound multi-system trauma with asystole or PEA
- If determination of death cannot be made, perform ALS resuscitation for 20 minutes **on scene. If patient is in refractory Vfib (3 unsuccessful shocks), transport to nearest STEMI Receiving Center.**
 - If the above procedures have been completed without ROSC, resuscitation may be discontinued, and determination of death made when **ANY** of the following are present:
 - Information (e.g. valid DNR or POLST form) becomes available which precludes continuation of resuscitation efforts
 - $ETCO_2 \leq 10\text{mm/Hg}$ and the rhythm is asystole or PEA
- If determination of death can still not be made for medical arrests, continue resuscitation for ten additional minutes (30 minutes total) at which point resuscitation may be discontinued and determination of death made if ROSC has not occurred. **If patient in refractory VF, transport is warranted.**

PHYSICIAN CONSULT

- Evidence exists that resuscitative efforts are not desired or appropriate (e.g. family request) and above criteria is not met
 - $ETCO_2 > 10\text{mm/Hg}$ after 30 minutes of resuscitation efforts
- When applicable, notify the appropriate law enforcement agency and remain on the scene until law enforcement or coroner arrives
 - Complete the Determination of Death form and leave a copy at the scene if the patient will be transferred to the coroner

DOCUMENTATION- ESSENTIAL ELEMENTS

- Criteria for discretionary determination of death (i.e., DNR or valid POLST form)
- Name and phone number of physician authorizing termination of resuscitation
- When possible, attach copy of DNR to PCR or include type of DNR and physician information

RELATED POLICIES/ PROCEDURES

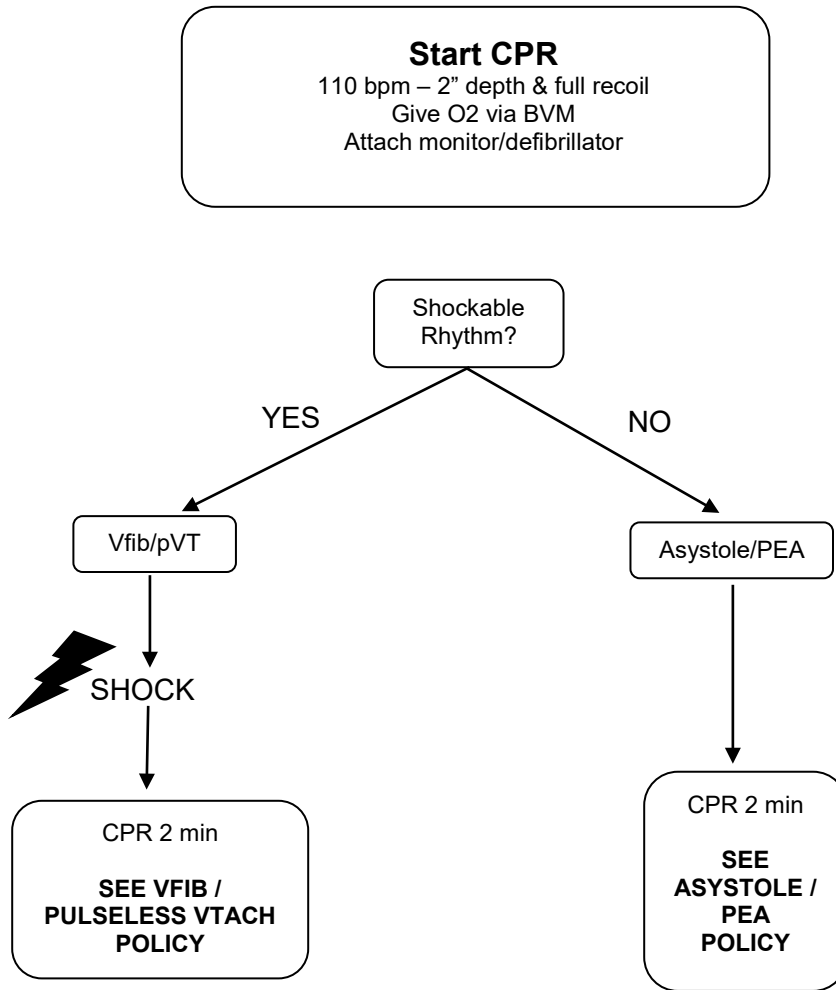
- BLS Determination of Death BLS 5
- DNR GPC 7
- Cardiac Policies: Asystole C3; PEA C2; Cardiac Arrest Policy, **VFIB/Pulseless VTACH C1**
- Cold Induced Injuries E2
- Trauma Triage and Destination Guideline Policy 4613

ADULT CARDIAC ARREST

ALWAYS USE STANDARD PRECAUTIONS

INDICATION

- Unresponsive; no breathing or has agonal respirations; no pulse



Critical Information:

- Witnessed vs Unwitnessed
- Consider pre-cordial thump if witnessed and defibrillator not immediately available
- Compress at 110 bpm. Use metronome or similar device
- ~~Manual CPR is preferred; Mechanical CPR is preferred when transporting. is an acceptable alternative~~
- Change compressors every 2 minutes
- Minimize interruptions
- If hypothermic < 95F, delay compressions for 3 minutes; focus on ventilations and active rewarming
- Defibrillate per manufacturer's recommendations.
- Do not stop compressions while defibrillator is charging
- Resume compressions immediately after shock

BLS Airway Management

- BLS airway is preferred during the first 5 min
- Use two-person BLS airway management whenever possible
- Avoid excessive ventilation
- 30:2 compression/ventilation ratio

ALS Airway Management

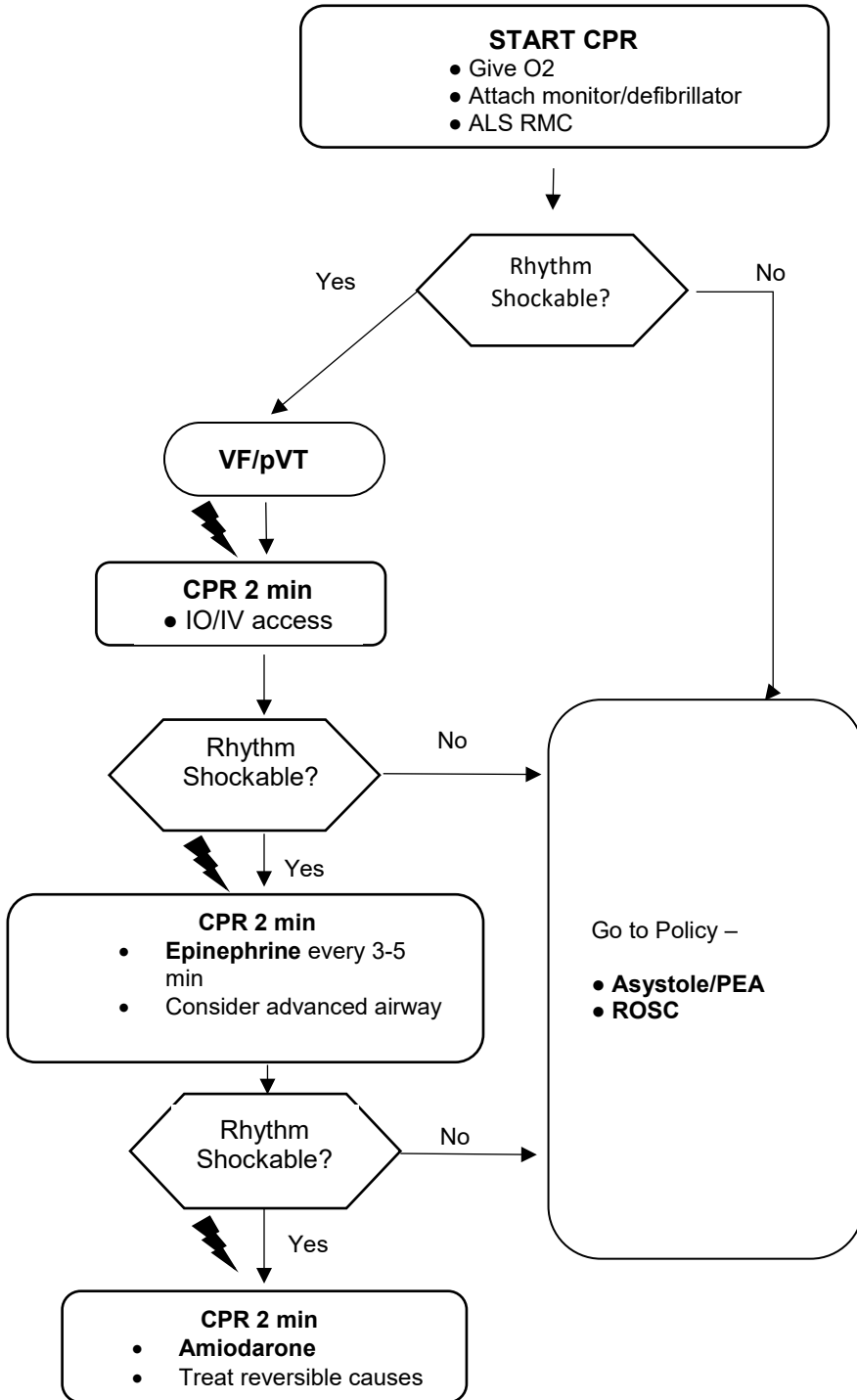
- King Airway/Video laryngoscopy (VL) preferred
- Laryngoscopy for ETT must occur with CPR in progress. Do not interrupt CPR for >10 seconds for tube placement
- Use continuous ETCO2 to monitor CPR effectiveness and advanced airway placement.
- Maintain O2 sat 94-99%
- 1 breath every 6 seconds

Special Considerations

- ~~Movement of patient during CPR may be detrimental to outcome~~
- If pt is in refractory Vfib (3 unsuccessful shocks), begin transport to available SRC. Otherwise, provide resuscitation on scene until ROSC or when patient meets Determination of Death criteria
- Regardless of the above, transportation is warranted in the following situations: ~~refractory VF~~, unsafe scene conditions, unstable airway, hypothermia/hyperthermia as a primary cause of arrest, any patient pulled from a fire in cardiac arrest
- To assure ROSC continues, remain on scene for 5-10 minutes and then transport to a STEMI Receiving Center

VENTRICULAR FIBRILLATION/PULSELESS VENTRICULAR TACHYCARDIA

ALWAYS USE STANDARD PRECAUTIONS



Critical Information:

- Witnessed vs Unwitnessed
- Consider pre-cordial thump if witnessed and defibrillator not immediately available
- Compress at 110 bpm. Use metronome or similar device
- ~~Manual CPR is preferred; Mechanical CPR is an acceptable alternative and preferred when transporting refractory Vfib~~
- Change compressors every 2 minutes
- Minimize interruptions
- If hypothermic <95F, delay compressions for 3 minutes; focus on ventilations and active rewarming
- Defibrillate per manufacturer's recommendations.
- Do not stop compressions while defibrillator is charging
- Resume compressions immediately after shock

BLS Airway Management:

- BLS airway is preferred during the first 5 minutes
- Use two-person BLS airway management whenever possible
- Avoid excessive ventilation
- 30:2 compression/ventilation ratio

ALS Airway Management:

- King Airway / Video Laryngoscopy (VL) preferred
- Laryngoscopy for ETT must occur with CPR in progress. Do not interrupt CPR for >10 seconds for tube placement
- Use continuous ETCO2 to monitor CPR effectiveness and advanced airway placement.
- Maintain O2 sat 94-99%
- 1 breath every 6 seconds

Drug Therapy:

- **Epinephrine** 1mg (0.1mg/ml concentration) IV/IO q 3-5 minutes
- **Amiodarone** first dose: 300mg IV/IO; second dose 150mg IV/IO in 3-5 minutes. If rhythm converts to ROSC after Amiodarone, consider infusion of **Amiodarone drip** (150mg in 100ml NS, 1mg/min = 40 gtts/min with 60 gtt/ml tubing)

Reversible Causes:

- Hypovolemia
- Hypoxia
- Hydrogen Ion (Acidosis)
- Hypo-/Hyperkalemia
- Hypothermia
- Tension Pneumothorax
- Tamponade (cardiac)
- Toxins
- Thrombosis, pulmonary

For refractory Vfib (3 unsuccessful shocks) >30 min, transport to nearest available STEMI Receiving Center

CEREBROVASCULAR ACCIDENT (STROKE)

ALWAYS USE STANDARD PRECAUTIONS

INDICATION

Sudden onset of weakness/paralysis, speech or gait disturbance

TREATMENT

- ALS RMC
 - Secure IV access (antecubital preferred) if patient meets Early Stroke Notification criteria
 - Elevate head of bed 20-30% elevation or place in left lateral decubitus
- **If last known well < 4.5 hours and blood glucose level > 60**, provide **Early Stroke Notification** if **all any of the following** are true:
 - Abnormal Cincinnati Prehospital Stroke Scale (CPSS) score
 - **Abnormal Visual Fields Assessment**
 - **Abnormal Cerebellar Assessment**
 - ~~Last known well < 4.5 hours~~
 - Symptoms are most likely due to stroke and not a stroke mimic
 - ~~Blood glucose level > 60~~
- If the patient meets criteria for early notification
 - During radio report, provide patient identifying information – hospital medical record number if known and/or last name and DOB of patient
 - Rapidly transport to patient's preferred Primary Stroke Center (PSC), as long as the estimated transport time is not > 15 minutes longer than the closest PSC.
 - Preferred PSC: patient's preference or PSC with patient's medical records
 - No preferred PSC: transport to the closest PSC
 - Notify family members/medical decision maker that their immediate presence at the hospital is critical for optimal care
 - Bring names and best phone numbers for the patient's medical decision maker and whoever last saw the patient normal whenever possible
- If high suspicion of rapidly progressive intracranial bleed (sudden, witnessed onset of coma or rapidly deteriorating GCS especially in setting of severe headache) transport to Marin General Hospital

DOCUMENTATION- ESSENTIAL ELEMENTS

- Criteria for Early Stroke Notification
- Choose CVA as Primary Impression
- **Name and contact information for patient family member/decision maker and/or those who had last seen the patient normal (e.g., skilled nursing personnel)**
- Documentation of CPSS and hospital notification
- Time last known well (document in military time). If time last known to be well is unknown or indeterminate, document and report
- Blood glucose level
- **Any LOC**
- **Any seizure activity**
- GCS
- History of intracranial hemorrhage
- Serious head injury within 2 months

- Taking anticoagulant medications (e.g. Warfarin/ Coumadin, Pradaxa/Dabigatran, Xarelto/Rivaroxaban, Eliquis/Apixaban, Lovenox/Enoxaparin)
- Improving neurological deficit

RELATED POLICIES/ PROCEDURES

- Destination Guidelines GPC 4
- Prehospital / Hospital Contact Policy 7001
- Ambulance Diversion Policy 5400
- Coma/ALOC N1

Cincinnati Pre-Hospital Stroke Scale (CPSS)

Facial Droop (the patient shows teeth or smiles)

___ Normal: both sides of the face move equally

___ Abnormal: Right side of the face does not move as well as the left

___ Abnormal: Left side of the face does not move as well as the right

Arm Drift (the patient closes their eyes and extends both arms straight out for 10 seconds)

___ Normal: both arms move the same, or both arms do not move at all

___ Abnormal: Right arm either does not move, or drifts down compared to the left

___ Abnormal: Left arm either does not move, or drifts down compared to the right

Speech (the patient repeats "The sky is blue in Cincinnati." or another sentence)

___ Normal: the patient says the correct words with no slurring of words

___ Abnormal: the patient slurs words, says the wrong words, or is unable to speak

Visual Fields/Cerebellar Assessment

Visual Fields Assessment

___ Normal: patient able to count fingers in all four visual field quadrants

___ Abnormal: patient unable to correctly count fingers in one or more visual field quadrants

Cerebellar Assessment (finger-to-nose)

___ Normal: patient able to move their index finger from their nose to the examiner's finger

___ Abnormal: Patient exhibits clumsy/unsteady movements or "overshoots"

TOXIC INHALATION

ALWAYS USE STANDARD PRECAUTIONS

INDICATION

- Respiratory distress caused by inhalation of toxic gases
- Symptoms may include headache, malaise, dizziness, nausea/vomiting, seizures, **hypotension**, coma; ~~which~~ may be associated with cherry- red color of mucous membranes (late sign)
- Consider carbon monoxide (CO) poisoning **or cyanide poisoning** with any patient exposed to ~~products of combustion~~ **toxic gases in an enclosed area**

TREATMENT

- Rapid removal of patient from toxic environment
- ALS RMC
- **Administer** high flow oxygen; ~~give oxygen~~ despite normal oxygen saturation levels
- ~~ALS RMC~~
- If wheezing - **Albuterol** 5 mg in 6 ml **NS** via HHN, repeat as indicated
- CO monitoring, if available
High Suspicion of CO poisoning:
 - Any patient (non-smoker) with CO level >9%
 - Any patient (smoker) with CO level >12%At Risk for CO poisoning (at risk=pregnant, children <6y, elderly, patients with history of respiratory problems)
 - Any "at risk" patient (non smoker) with CO level >4%
 - Any "at risk" patient (smoker) with CO level >8%
 - Any patient with CO symptoms and confirmed source of CO
- **ONLY if patient exhibits serious signs and symptoms of smoke inhalation (e.g. unconscious/unresponsive, hypotension, and/or severely ALOC) ~~with soot in the mouth or nose~~ treat with CYANOKit (hydroxocobalamin):**
 - **Adult: 5 g IV/IO infusion over 15 minutes (5mL/min). May repeat once if severe signs of poisoning and lack of clinical response to first dose, MAX total dose of 10 g.**
 - **Pediatric: Not locally indicated.**

DOCUMENTATION – ESSENTIAL ELEMENTS

- Nature of exposure
- CO levels
- At-risk criteria

AMBULANCE TRANSPORTATION OF PEDIATRIC PATIENTS

PURPOSE

To provide guidance regarding the safe transport of pediatric patients in an ambulance

GENERAL INFORMATION

- This policy is based on recommendations as published by the National Highway Traffic Safety Administration (NHTSA) for the transportation of children
- Under normal circumstances, transportation of a child in any of the following ways is not permissible:
 - Unrestrained
 - On a parent/caregiver's lap or held in their arms
 - Using only horizontal stretcher straps if the child cannot be properly restrained according to the stretcher manufacturer's specifications for proper restraint of patients
 - On the bench seat or any seat perpendicular to the forward motion of the vehicle

POLICY

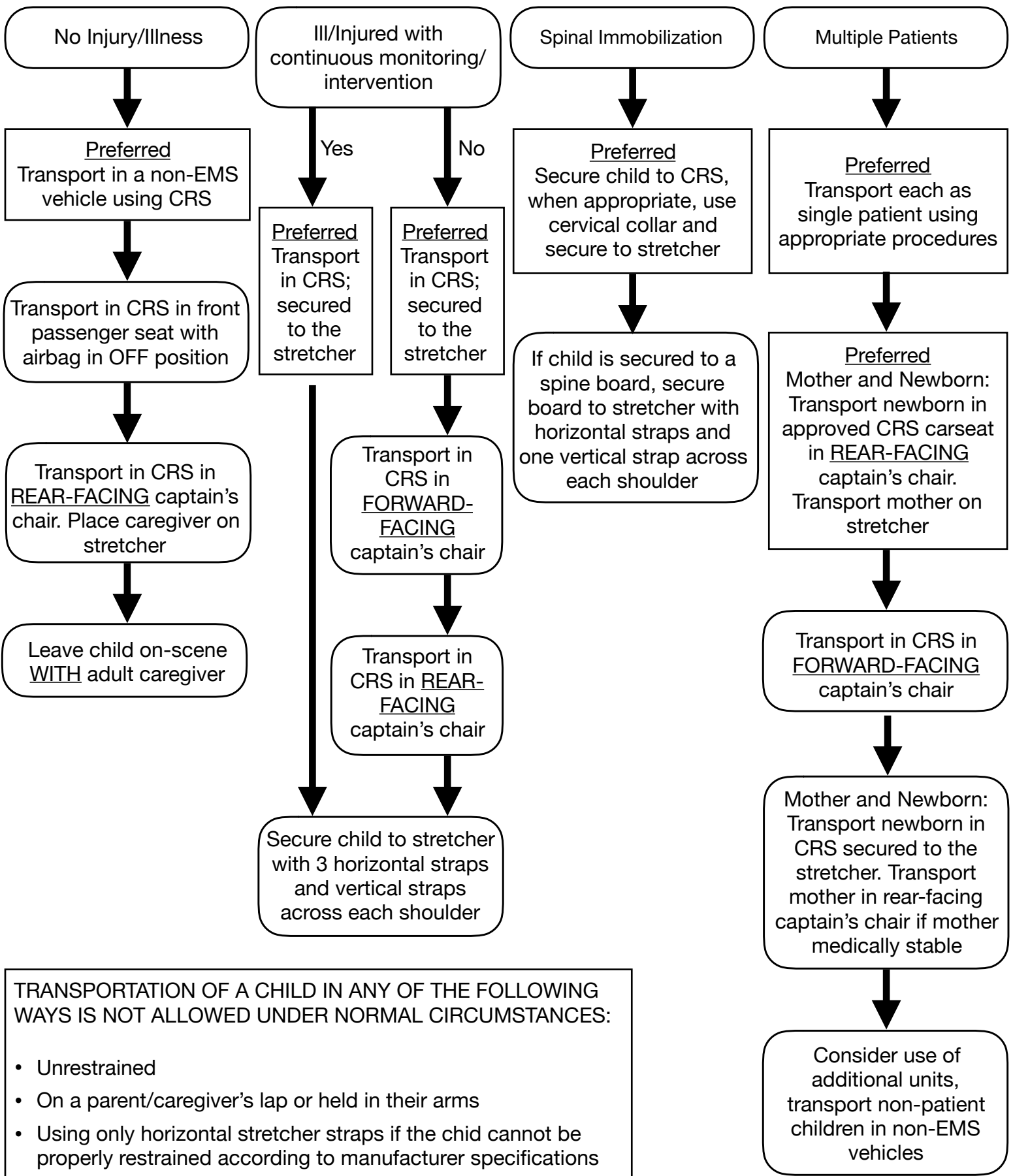
- The child's age and weight shall be considered when determining an appropriate restraint system.
- Pediatric patients that do not require a child safety seat should be transported following the same procedure as adult patients
- Use of child's own carseat can be considered if:
 - No other restraint systems are available
 - Minor vehicle crash (ie: "fender bender")
 - Carseat is a convertible seat with a forward-facing *and* rear-facing belt paths (must have two belt paths).
- The child shall be secured by the harness within the seat at all times. Procedures should be performed around the harness straps.
- Transportation of an uninjured/not ill child
 - Preferred: Transport child in a vehicle other than an ambulance using a properly installed, size appropriate child restraint system
 - Alternative: Transport in a size-appropriate child seat properly installed in the front passenger seat of the ambulance with the airbags off or in another forwardfacing seat *OR* transport in a size-appropriate child seat properly installed onto or built into rear-facing EMS provider captain's chair
 - Consider delaying the transport of the uninjured/not ill child until additional vehicles are available without compromising other patients on the scene. Non patient children should be transported in non-EMS vehicles, if possible.
- Transport of an ill/injured child not requiring continuous intensive monitoring or intervention
 - Preferred: Transport child in a size-appropriate child restraint system secured appropriately to the stretcher
 - Alternative: Transport child in the forward-facing EMS provider captain's chair in a size appropriate restraint system *OR* transport child in the rear-facing EMS provider captain's chair in a size appropriate restraint system

- Transport of an ill/injured child whose condition requires continuous intensive monitoring or intervention
 - Preferred: Transport child in a size-appropriate child restraint system secured appropriately to the stretcher
 - Alternative: With the child's head at the top of the stretcher, secure the child to the stretcher with three horizontal straps and one vertical strap across each shoulder. If assessment/intervention requires the removing of restraint strap(s), restraints should be re-secured as quickly as possible.
- Transport of an ill/injured child who requires cervical spinal immobilization, spinal motion restriction, or lying flat
 - Preferred: Secure the child to a size-appropriate child restraint, when appropriate, use cervical collar and secure child to stretcher. If child is secured to a spine board, secure board to stretcher with horizontal straps and one vertical strap across each shoulder (See GPC 13)
- Transport of a child or children requiring transport as part of a multiple patient transport (newborn with mother, multiple children, etc)
 - Preferred: If possible, for multiple patients, transport each as a single patient according to guidance described above
 - For mother and newborn: Transport the newborn in an approved size appropriate restraint system carseat on the rear-facing EMS provider captain's chair with the restraint system properly installed and facing the rear of the ambulance. The carseat must have a forward and rear-facing belt path. Transport the mother on the ambulance stretcher. Even with childbirth in the field, it is never appropriate to transport a child held in the parent/guardian/caregiver's arms or on their lap
 - Alternative: Transport child in the forward-facing EMS provider captain's chair in a size appropriate restraint system
 - Consider the use of additional units to accomplish safe transport
- For mother and newborn, transport the newborn in a size-appropriate restraint systems secured appropriately to stretcher. Transport mother in rear-facing EMS provider captain's chair if mother is medically stable

RELATED POLICIES/PROCEDURES

Spinal Motion Restriction (SMR) GPC 13

[Pediatric Transportation Flowchart](#)



TRANSPORTATION OF A CHILD IN ANY OF THE FOLLOWING WAYS IS NOT ALLOWED UNDER NORMAL CIRCUMSTANCES:

- Unrestrained
- On a parent/caregiver's lap or held in their arms
- Using only horizontal stretcher straps if the child cannot be properly restrained according to manufacturer specifications
- On the bench seat or any seat perpendicular to the forward motion of the vehicle