



Lactated Ringers

1.7

Eligible Patients:

- Any patient who requires fluid resuscitation or fluid bolus

Dose

- Follow appropriate protocol for isotonic fluid administration

Contraindications

- Patients with known or suspected renal insufficiency/failure and on dialysis
- Patients with known or suspected traumatic brain injury
- Patients with known or suspected hyponatremia
- Conjunctive administration with blood
- Isotonic fluid is contraindicated in fluid overloaded patients
- Benefit has not been shown for LR administration in the presence of cardiac arrest. Lactated ringers should only be used in CA with medical command consultation.
- All medications carried by MRTSA are compatible with LR

EMT STANDING ORDERS

E

- Routine Patient Care

ADVANCED EMT / PARAMEDIC

A

P

- Lactated ringers may be given up to 2000ml
- Lactated ringers should be given at 20ml/kg for adults and children with fluid status checks in 500ml aliquots
- Acute burn patients must have glucose monitoring and may require dextrose administration
- Fluid status checks should include
 - Lung sounds
 - Oral mucosa
 - Trending blood pressure
 - Pedal Edema

MEDICAL CONTROL MAY ORDER



- Additional boluses



1.9

Nausea / Vomiting

EMT STANDING ORDERS

E

- Routine Patient Care
- Isopropyl Alcohol via inhalation (prep pads)

ADVANCED EMT STANDING ORDERS

A

- Ondansetron 4 mg IV/IM/PO if > 15 years old

MEDICAL CONTROL MAY ORDER



- Ondansetron 0.1 mg/kg to a maximum dose of 4mg IV/IM for patients > 6-months – 14-years-old **OR**
- Ondansetron 4 mg PO

PARAMEDIC STANDING ORDERS

P

- Ondansetron 4 mg IV/IO/IM/PO (may repeat 4 mg after 10 minutes if no improvement) if > 14 years old **OR**
- Droperidol 0.625 – 1.25 mg IV/IO/IM if > 14-years-old
- If persistent vertigo after antiemetic administration, you may administer Midazolam 1 mg IV/IO **OR**
- Lorazepam 1 mg IV/IO **OR**
- Diazepam 5 mg IV/IO

MEDICAL CONTROL MAY ORDER



- Additional doses of above medications
- Ondansetron 0.15 mg/kg to a maximum dose of 4 mg IV/IM for patients > 6-months – 14-years-old



CAUTION: The use of Droperidol can cause sedation, use caution when combining with a benzodiazepine. Consider alternative therapies if neurological exam is anticipated.



CAUTION: The use of Droperidol can cause increased sedation in elderly patients, consider Ondansetron 4 mg **OR** Droperidol 0.625 mg for patients > 65-years-old

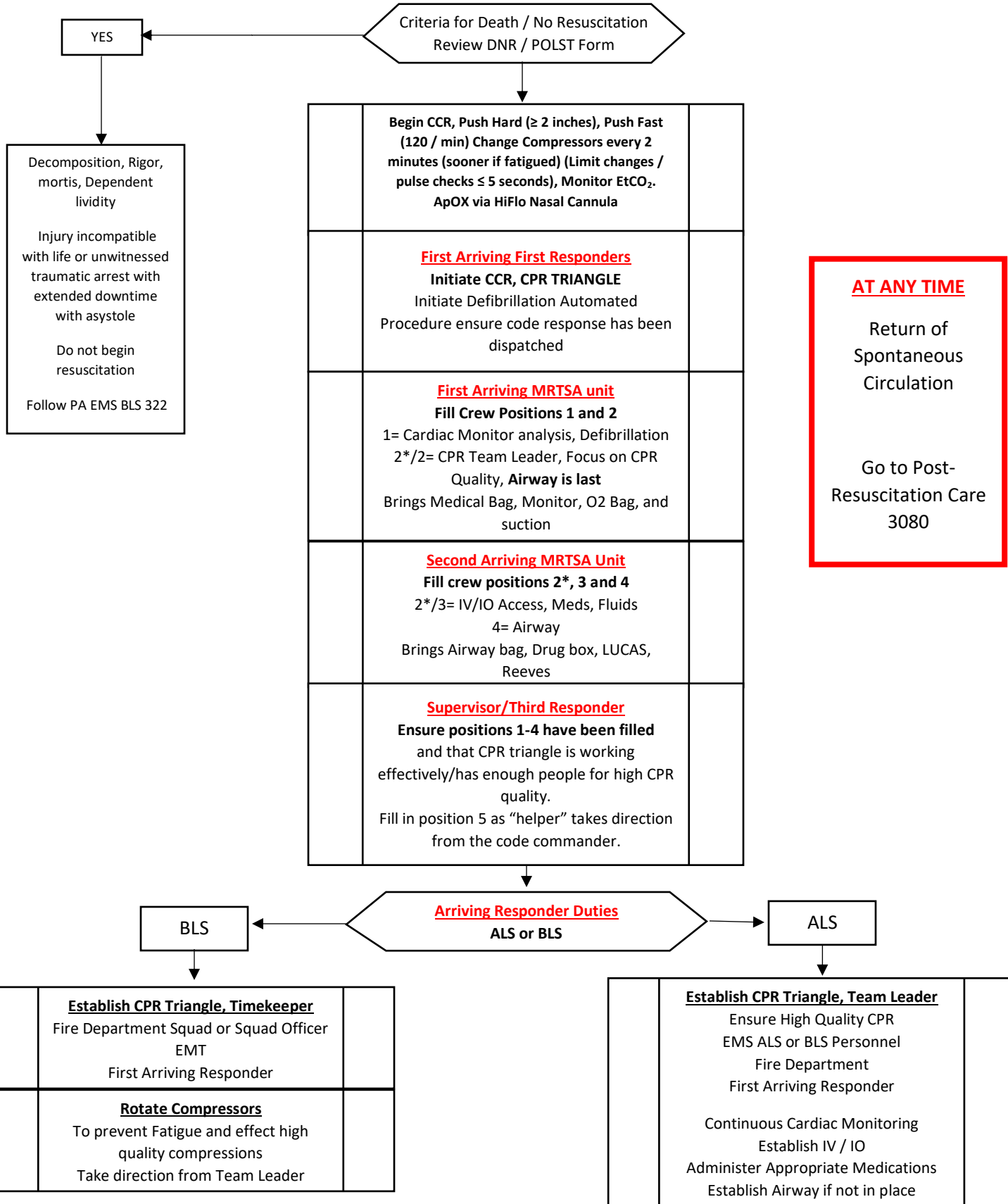
PEARLS

- Pain can be a source of nausea, consider treating pain with positioning and/or analgesics prior to providing antiemetic medications.
- Ondansetron takes 30 minutes to start working and is indicated and most effective in chemotherapy induced nausea and post operative nausea.
- Both Ondansetron and Droperidol can cause QTc prolongation, this is seen more with increased doses. Clinicians should be cautious of this and avoid giving these medications in patients with a QTc > 500ms.
- Droperidol is considered especially effective in patients suffering from cyclic vomiting syndromes and cannabinoid induced hyperemesis



Team Focused CPR

2.1





Team Focused CPR

2.1

Pre-ROSC Cardiac Arrest Checklist

- ☐ Positions 1-4 have been filled in order
- ☐ Monitor is visible and Position 1 is viewing the rhythm adjuncts attached
- ☐ Monitor is in PADS mode
- ☐ Metronome at 110 beats per minute and BVM Timer light is on
- ☐ Identify and shock V-Fib / V-Tach every 2 minutes (limit pre-shock pause with charged pulse checks)
- ☐ Change compressors every 2 minutes (Ensure a dedicated timekeeper)
- ☐ Pause at compressor switch to identify rhythm (no more than 5 seconds)
- ☐ O₂ cylinder with oxygen in it is attached to BVM, back up cylinder is available next to the primary
- ☐ Airway is managed using basic to advanced procedures
- ☐ EtCO₂ waveform is present, and value is being monitored
- ☐ IV or IO access (Humeral Head) with NSS (**max 2 liters of fluid, 1 liter in shockable rhythm**)
- ☐ Underlying cause has been considered and treated early in arrest
- ☐ Place gastric tube to prevent gastric distention
- ☐ Tension PTX has been considered
- ☐ Family is receiving care and is at the patient's side

Post ROSC Cardiac Arrest Checklist

- ☐ ASSESS EtCO₂ (should be >20 with good waveform)
- ☐ FINGER on pulse maintain, for 10 minutes. DO NOT TRANSPORT; prepare for transport during the 10-minute waiting period.
- ☐ Continuous visualization of cardiac monitor rhythm
- ☐ Check O₂ supply and pulse Ox to TITRATE to SpO₂ 94-99%. Do not try to obtain a "normal" EtCO₂ by increasing respiratory rate
- ☐ Obtain 12-lead EKG after 5 minutes, if STEMI, expedite CONTROLLED movement towards transport; prepare for transport during the 10-minute waiting period. Contact receiving facility once transport decision is made.
- ☐ Assess for & TREAT bradycardias < 60 bpm
- ☐ Obtain B/P -- Pressor agent indicated for MAP < 65
- ☐ Pre-mix pressors in preparation for hypotension
- ☐ Evaluate for post-resuscitative airway placement (eg, ETT). Strongly consider bougie use if airway change is indicated.
- ☐ When patient is moved, perform **CONTINUOUS PULSE CHECK** and continuous monitoring of cardiac rhythm
- ☐ Mask is available for BVM in case advanced airway fails
- ☐ Once in ambulance, confirm pulse, breath sounds, SpO₂, EtCO₂, and cardiac rhythm
- ☐ Appropriate personnel and number of personnel for transport in case of re-arrest, LUCAS is in place during tx.

PEARLS

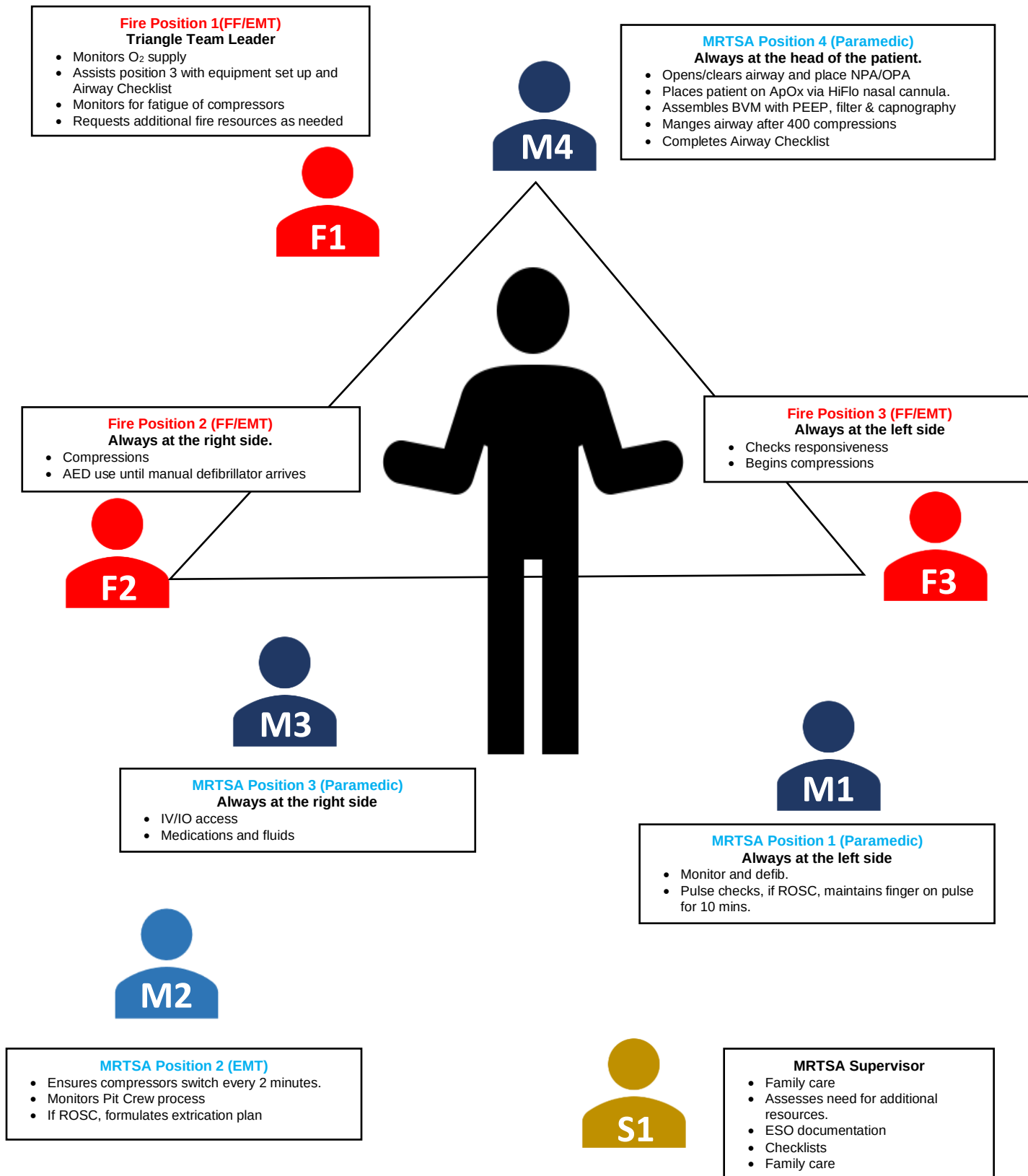
- Efforts should be directed at high quality and continuous compressions with limited interruptions and early defibrillation when indicated.
- DO NOT HYPERVENTILATE: Ventilate generally 8 – 10 breaths per minute or as guided by EtCO₂
- Do not interrupt compressions to place endotracheal tube. Consider BIAD first to limit interruptions.
- Passive oxygenation should be utilized until resources arrive for BVM and may continue during the code.
- Do not interrupt compressions to place endotracheal tube. Consider BIAD first to limit interruptions.
- Success is based on proper planning and execution. Procedures require space and access; Make room to work.
- Assess for and treat Hs and Ts: Hypovolemia, Hypoxia, Hydrogen ion excess (acidosis), Hypo/Hyperkalemia, Hypothermia, Hypo/Hyperglycemia, Tablets/Toxins/Tricyclics, Tamponade, Tension pneumothorax, Thrombosis (MI), Thromboembolism (Pulmonary Embolism), Trauma



Team Focused CPR

2.1

MRTSA CPR Triangle Positions (With FD Response)

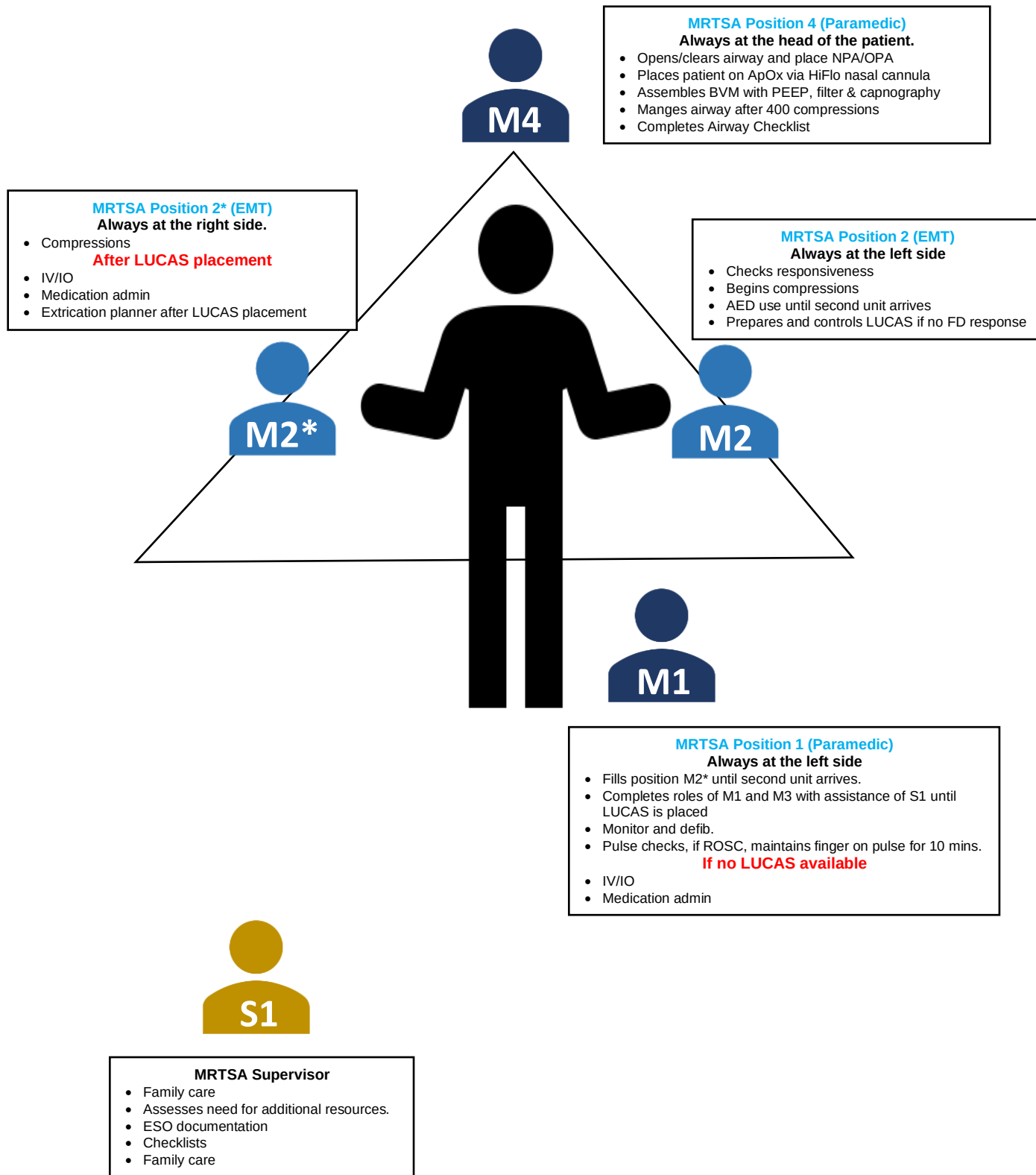




Team Focused CPR

2.1

MRTSA CPR Triangle Positions (Without FD Response)





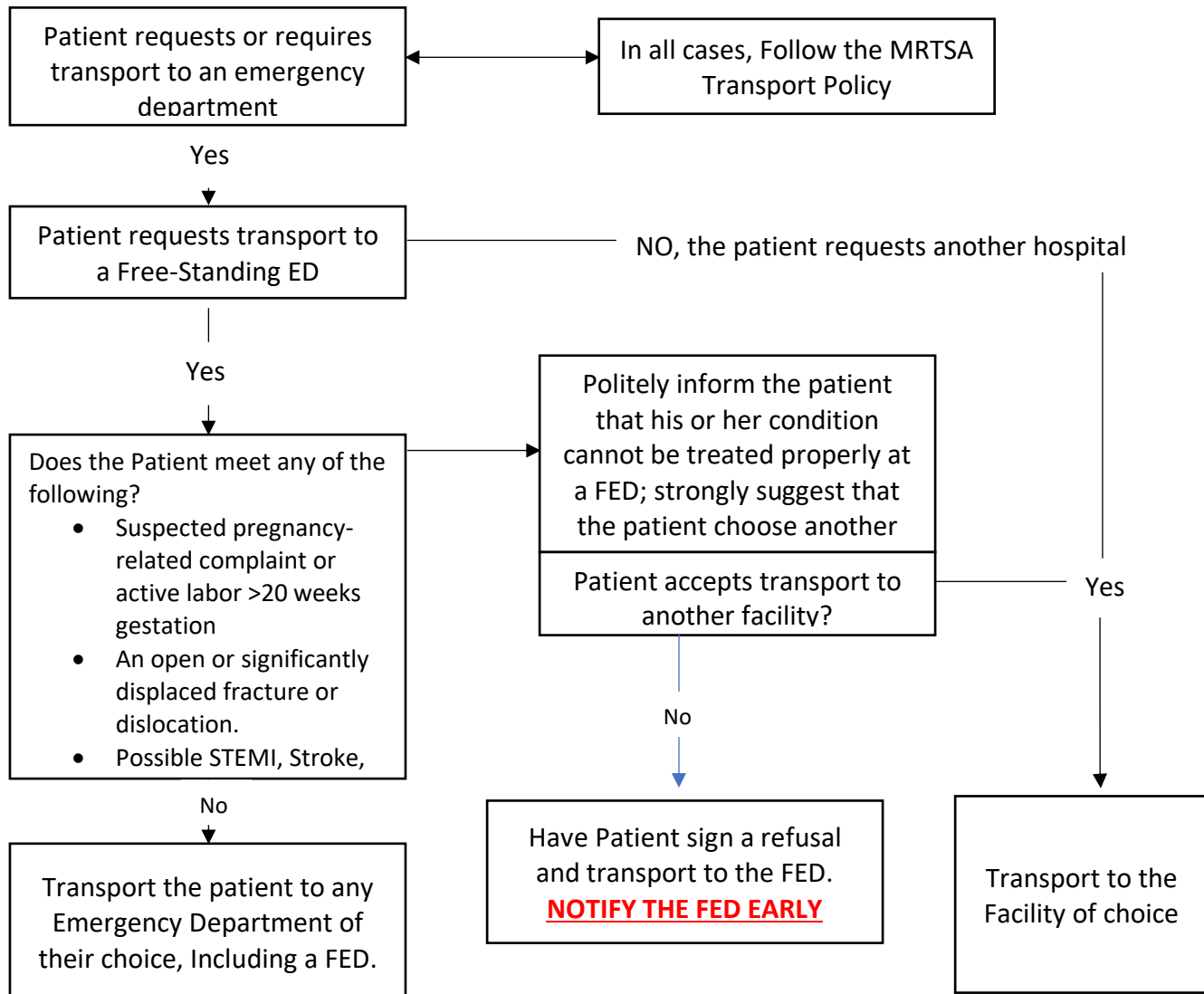
Free Standing ED's

4.1

Adult and Pediatric Patients may be transported to Free-Standing EDs; exceptions are outlined in this plan

The purpose of this plan is to:

- Transport patients to the closest appropriate receiving facility of their choice, unless otherwise indicated by their clinical condition.



PEARLS

- A free-standing Emergency Department (FED) is a full-service emergency facility and is bound by EMTALA.
- Patient may be admitted directly to a receiving hospital from the FED
- An urgent care center is not a FED