

CoxHealth EMS



**Medication Protocols,
Patient Care Protocols,
Standard Operating Procedures & Policies
2020v1**

Effective Date:

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Approved by:
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Affiliate Agencies



- Ash Grove Fire Protection District
- Barry-Lawrence Ambulance District
- Billings Fire Protection District
- Brookline Fire Protection District
- Clever Fire Protection District
- Conway Volunteer Fire Department
- Dade County First Responders
- Eldridge Volunteer Fire Department
- Elkland Fire Protection District
- Freistatt Fire Protection District
- Golden City Fire Department
- Good Hope Volunteer Fire Department
- Hickory County First Responders
- Lebanon Rural Fire Protection District
- Logan-Rogersville Fire Protection District
- Miller Rescue
- Monett City Fire Department
- Monett Rural Fire protection District
- Nebo-Falcon Fire Protection District
- Niangua Volunteer Fire Department
- Nixa Fire Protection District
- North Stone Northeast Barry County Fire Protection District
- Norwood Volunteer Fire Department
- Ozark Fire Protection District
- Pierce City Fire Department
- Purdy Fire Protection District
- Republic Fire Department
- Southern Webster County Fire Protection District
- Sparta Fire Protection District
- Walnut Grove Fire Protection District
- West Republic Fire Protection District

“Never underestimate the power of dreams and the influence of the human spirit. We are all the same in this notion: The potential for greatness lives within each of us.” —Wilma Rudolph

“Always dream and shoot higher than you know you can do. Don't bother just to be better than your contemporaries or predecessors. Try to be better than yourself.” —William Faulkner

“You must expect great things of yourself before you can do them.”
—Michael Jordan

“Don't aspire to make a living, aspire to make a difference.” -
Denzel Washington

“Desire, burning desire, is basic to achieving anything beyond the ordinary.” —

Joseph B. Wirthlin

“Great thoughts speak only to the thoughtful mind, but great actions speak to all mankind.” —Theodore Roosevelt

“People do not decide to become extraordinary. They decide to accomplish extraordinary things.” —Edmund Hillary

**“Mediocrity will never do. You are capable of something better.”
—Gordon B. Hinckley**

“Fast is fine, but accuracy is final. You must learn to be slow in a hurry.” -
Wyatt Earp

“You're either green and growing or you're ripe and rotting.” - Ray Kroc

“Change is your friend not your foe; change is a brilliant opportunity to grow.” —Simon T. Bailey

“Do not follow where the path may lead. Go instead where there is no path and leave a trail..” —Ralph Waldo Emerson

“I do not believe in taking the right decision, I take a decision and make it right.”
— Muhammad Ali Jinnah

“I like to listen. I have learned a great deal from listening carefully. Most people never listen.”
— Ernest Hemingway

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License Scope Outline

Emergency Medical Responder:

- Airway and Breathing
 - Insertion of airway adjuncts intended to go into the oropharynx or nasopharynx
 - Use of positive pressure ventilation devices such as the bag-valve-mask
 - Suction of the visual upper airway
 - Supplemental oxygen therapy
- Pharmacological interventions
 - Use of unit dose auto-injectors for the administration of life saving medications intended for self or peer rescue in hazardous materials situations
- Medical/Cardiac Care
 - Use of an automated external defibrillator
- Trauma Care
 - Manual stabilization of suspected cervical spine injuries
 - Manual stabilization of extremity fractures
 - Bleeding control
 - Emergency moves

EMT-Basic: First Responder Skills PLUS:

- Airway and Breathing
 - Insertion of airway adjuncts intended to go into the oropharynx or nasopharynx and supraglottic airway devices
 - Use of positive pressure ventilation devices such as manually triggered ventilators and automatic transport ventilators
 - Use of CPAP and BiPAP with preset settings
- Pharmacological Interventions
 - Assist patients in taking their own prescribed medications
 - Administration of the following over-the-counter medications with appropriate medical oversight:
 - Oral glucose for suspected hypoglycemia
 - Aspirin for chest pain of suspected ischemic origin
- Medical/Cardiac Care
 - 12-Lead Acquisition and transmission
 - Blood Glucose measurement via finger stick and glucometer
- Trauma Care
 - Application and inflation of the pneumatic anti-shock garment (PASG) for fracture stabilization

Advanced EMT: EMT-Basic / First Responder Skills PLUS:

- Airway and Breathing
 - Insertion of airways that are NOT intended to be placed into the trachea
 - Tracheobronchial non-visible suctioning of an already intubated patient
- Pharmacological Interventions
 - Establish and maintain peripheral intravenous access
 - Administer (non-medicated) intravenous fluid therapy
 - Administer sublingual nitroglycerine to a patient experiencing chest pain of suspected ischemic origin
 - Administer subcutaneous or intramuscular epinephrine to a patient in anaphylaxis
 - Administer glucagon to a hypoglycemic patient
 - Administer intravenous D50 to a hypoglycemic patient
 - Administer inhaled beta agonists to a patient experiencing difficulty breathing and wheezing
 - Administer a narcotic antagonist to a patient suspected of narcotic overdose

EMT-Paramedic: EMT-Basic / First Responder and Advanced EMT Skills PLUS:

- Airway and Breathing
 - Perform endotracheal intubation
 - Perform percutaneous cricothyrotomy¹
 - Decompress the pleural space
 - Perform gastric decompression
- Pharmacological Interventions
 - Insert an intraosseous cannula
 - Enteral and parenteral administration of approved prescription medications
 - Access indwelling catheters and implanted central IV ports for fluid and medication administration
 - Administer medications by IV infusion
 - Maintain an infusion of blood or blood products

Resources:

- Missouri Revised Statutes - 190.142
- Missouri Code of State Regulations: - 19CSR 30-40.331 & 19 CSR 30-40.342
- National Highway Traffic Safety Administration – 2007 National EMS Scope of Practice Model (2007 is the currently adopted model for Missouri)

The Dr. Brandt EMS Commandments

- Control major hemorrhage
 - If you can hear it bleed, it becomes your priority
- Ensure adequate ventilation
 - SPO2 does not qualify adequacy
- Support perfusion of oxygen and glucose
- Provide accurate and timely information to the appropriate receiving facility
- Transport the ill and injured to an appropriate facility

Protocol How-To

Protocol How-To

Airway: Adult, Failed

History:

- These are important information items to obtain when gathering the patients medical history

Signs & Symptoms:

- These are likely signs and symptoms of a typical patient managed with this protocol.

Differential:

- These are possible diagnoses that you as the provider should be aware might be a factor or cause of the patients current condition.

This is a progression arrow which identifies the direction to travel through the protocol after completing or considering the last instruction

Clicking the Legend will take you to the License Scope Outline

License Scope Legend:

B	EMT-Basic	B
I	Advanced EMT	I
P	EMT-Paramedic	P
M	Medical Control	M

This is an information box which can contain:

- Questions about your patient
- Directions which do not require a license level
- Informational statements

This is the Title of the Protocol – Clicking this will take you to the Section Table of Contents

This is the Category of the Protocol

This number **DOES NOT** indicated the order of operations. This number is a unique "Step Identifier" which helps to identify the specific Instruction/step in the current protocol.

This is a skill for EMT-Basic and higher **B**

This is a skill for Advanced EMT and higher **I**

This is a skill for EMT-Paramedic and higher **P**

This is a skill which Medical Control Authorization **M**

This is the footer – Clicking this will take you to the Table of Contents

This is the Protocol Category-Number

This is the Annual Edition Number – Clicking this Number will take you to the Table of Contents

Pearls:

- **ITEMS IN RED ARE OF THE HIGHEST IMPORTANCE!**
- **PEARLS are some of the most important pieces of a protocol!**
- Important information and precautions regarding this protocol can be found here.

Approved By: Matt Brandt, M.D. 01/01/2020

Protocol Airway-2

2020

Airway Protocols

Latest Protocol Changes

2020v1 – 01/01/2020

- Annual Compliance Update.
- Added: New Public Safety Partners
- Added: "Agitated Delirium" to the Ketamine medication guide to indicate use cases
- Added: Pulmonary Edema based clinical care guidelines to the P1 Respiratory Distress Protocol
- Added: Epinephrine 1:100,000 for both adult and pediatric cardiac arrest
- Changed: As Requested, changes to Public Safety Partner names
- Changed: A4 Airway: Pediatric to not include reference to Drug Assisted Intubation
- Changed: G6 Non Emergency Transport to be more streamlined
- Changed: STEMI Center lists to reflect state changes
- Changed: Trauma Center lists to reflect state changes
- Changed: P3 Allergic Reaction Protocol to P2 Allergic Reaction Protocol
- Removed: Epinephrine 1:10,000
- Removed: P2 Pulmonary Edema Protocol

Pediatric Dose Chart

PEDIATRIC DRUG CHART		Per Cox EMS Protocols					Approved by Dr. Matt Brandt 01/01/2020				
		WEIGHT	GREY	PINK	RED	PURPLE	YELLOW	WHITE	BLUE	ORANGE	GREEN
		KG	2-5	6-7	8-9	10-11	12-14	15-19	20-24	25-29	30+
		LBS	6-11	13-15	17-20	22-25	27-31	33-40	42-49	53-62	65-80
Epinephrine	1:100,000	mg	20 mcg	60 mcg	80 mcg	100 mcg	120 mcg	150 mcg	200 mcg	250 mcg	300 mcg
10mcg/1ml	IV/IO	ml	2 ml	6 ml	8 ml	10 ml	12 ml	15 ml	20 ml	25 ml	30 ml
Epinephrine	1:1,000	mg	0.02 mg	0.06 mg	0.08 mg	0.1 mg	0.12 mg	0.15 mg	0.2 mg	0.25 mg	0.3 mg
1mg/1ml	IM	ml	0.02 ml	0.06 ml	0.08 ml	0.1 ml	0.12 ml	0.15 ml	0.2 ml	0.25 ml	0.3 ml
Versed	0.1 mg/kg	mg	0.2 mg	0.6 mg	0.8 mg	1 mg	1.2 mg	1.5 mg	2 mg	2 mg	2 mg
10mg/2ml	IV, IO, or IN	ml	0.04 ml	0.12 ml	0.16 ml	0.2 ml	0.24 ml	0.3 ml	0.4 ml	0.4 ml	0.4 ml
Adenosine	0.1 mg/kg	mg	0.2 mg	0.6 mg	0.8 mg	1 mg	1.2 mg	1.5 mg	2 mg	2.5 mg	3 mg
6mg/2ml	IV/IO	ml	0.07 ml	0.2 ml	0.27 ml	0.33 ml	0.4 ml	0.5 ml	0.66 ml	0.83 ml	1 ml
Adenosine	0.2 mg/kg	mg	0.4 mg	1.2 mg	1.6 mg	2 mg	2.4 mg	3.0 mg	4 mg	5 mg	6 mg
6mg/2ml	IV/IO	ml	0.14 ml	0.4 ml	0.52 ml	0.66 ml	0.8 ml	1 ml	1.3 ml	1.7 ml	2 ml
Morphine	0.1 mg/kg	mg	X	X	X	1 mg	1.2 mg	1.5 mg	2 mg	2.5 mg	3 mg
10 mg/ml	IV/IO	ml	X	X	X	0.1 ml	0.12 mg	0.15 ml	0.2 ml	0.25 ml	0.3 ml
Fentanyl	1 mcg/kg	mg	X	X	X	10 mcg	12 mcg	15 mcg	20 mcg	25 mcg	30 mcg
100mcg/2ml	IV, IO, or IM	ml	X	X	X	0.2 ml	0.24 ml	0.3 ml	0.4 ml	0.5 ml	0.6 ml
Narcan	0.5 mg	mg	0.5 mg	0.5 mg	0.5 mg	0.5 mg	0.5 mg	0.5 mg	0.5 mg	0.5 mg	0.5 mg
2mg/2ml	IV, IO, or IN	ml	0.5 mg	0.5 mg	0.5 mg	0.5 mg	0.5 mg	0.5 mg	0.5 mg	0.5 mg	0.5 mg

Medications


7. Medications

1. Acetaminophen
2. Adenosine
3. Albuterol
4. Amiodarone
5. Aspirin
6. Atropine
7. Calcium Chloride
8. Cardiac Electrical Intervention
9. Dextrose 10%
10. Dextrose 50%
11. Diltiazem
12. Diphenhydramine
13. Epinephrine 1:1,000
14. Epinephrine 1:100,000
15. Etomidate
16. Fentanyl
17. Furosemide
18. Glucagon
19. Glucose, Oral
20. Ketamine
21. Ketorolac
22. Labetalol
23. Lidocaine
24. Magnesium Sulfate
25. Methylprednisolone
26. Midazolam
27. Morphine Sulfate
28. Naloxone
29. Nitroglycerin
30. Normal Saline
31. Ondansetron
32. Oxygen
33. Oxytocin
34. Promethazine
35. Sodium Bicarbonate
36. Terbutaline
37. Thiamine
38. Tranexamic Acid

Medications

Medication	Adult	Pediatric
<p><u>Acetaminophen (Tylenol)</u></p> <p>Protocol:</p> <ul style="list-style-type: none"> > G2 – Pain Control > Ped10 – Pediatric Seizure <p>Indications:</p> <ul style="list-style-type: none"> Indicated for pain and fever control <p>Contraindications:</p> <ul style="list-style-type: none"> Avoid in patients with severe liver disease 	<ul style="list-style-type: none"> 650 mg PO <p style="text-align: center;">B</p>	<ul style="list-style-type: none"> 10 mg/kg PO <p style="text-align: center;">A</p>
<p><u>Adenosine (Adenocard)</u></p> <p>Protocol:</p> <ul style="list-style-type: none"> > C4 – SVT / Wide Complex Tachycardia > Ped11 – Pediatric SVT <p>Indications:</p> <ul style="list-style-type: none"> Specifically for treatment or diagnosis of Supraventricular Tachycardia 	<ul style="list-style-type: none"> 6 mg IV/IO fast-push over 1-3 seconds. Repeat with 12 mg IV/IO fast-push if needed. (Use Normal Saline flush with each dose) <p style="text-align: center;">P</p>	<ul style="list-style-type: none"> 0.1 mg/kg IV/IO fast-push. MAX DOSE = 6 mg Repeat with 0.2 mg/kg IV/IO fast-push if needed. MAX DOSE = 12 mg (Use Normal Saline flush with each dose) <p style="text-align: center;">P</p>
<p><u>Albuterol</u></p> <p>Protocol:</p> <ul style="list-style-type: none"> > P1 – Respiratory Distress > Ped9 – Pediatric Respiratory distress <p>Indications:</p> <p>☐ Beta-agonist nebulized treatment for use in respiratory distress with bronchospasm</p> <p>Contraindications:</p> <ul style="list-style-type: none"> Avoid in ADULT patients with HR > 150. 	<ul style="list-style-type: none"> 2.5 - 5.0 mg in NEB continuously as needed. MAX DOSE = 15 mg <p style="text-align: center;">A</p>	<ul style="list-style-type: none"> 2.5 mg in NEB continuously as needed, if HR < 200. MAX DOSE = 7.5 mg <p style="text-align: center;">A</p>
<p><u>Amiodarone (Cordarone)</u></p> <p>Protocol:</p> <ul style="list-style-type: none"> > C4 – SVT / Wide Complex Tachycardia > C6 – Cardiac Arrest Critical Thinking > Ped8 – Pediatric Cardiac Arrest Critical Thinking <p>Indications:</p> <ul style="list-style-type: none"> Antiarrhythmic used in V. Fib/V. Tach. <p>Contraindications:</p> <ul style="list-style-type: none"> Avoid in patients with heart block or profound bradycardia. 	<p><u>V. Fib / Perfusionless V-tach</u></p> <ul style="list-style-type: none"> 300 mg IV/IO push 150 mg IV/IO push for recurrent episodes <p><u>V. Tach with a pulse</u></p> <ul style="list-style-type: none"> 150 mg in 100cc NS INFUSION IV/IO over 10 min <p style="text-align: center;">P</p>	<p><u>V. Fib / Perfusionless V-tach</u></p> <ul style="list-style-type: none"> 5 mg/kg IV/IO push over 5 minutes <p><u>V. Tach with a pulse</u></p> <ul style="list-style-type: none"> 5 mg/kg IV/IO push over 5 minutes <p style="text-align: center;">P</p>

Medications

Medication	Adult	Pediatric
<p><u>Aspirin</u></p> <p>Protocol:</p> <ul style="list-style-type: none"> ➤ C1 – Chest Pain: Cardiac and STEMI <p>Indications:</p> <ul style="list-style-type: none"> • An antiplatelet drug for use in cardiac chest pain 	<ul style="list-style-type: none"> • 81 mg chewable (baby) x4 or 325 mg chewable tablet. <p style="text-align: center;">B</p>	
<p><u>Atropine</u></p> <p>Protocol:</p> <ul style="list-style-type: none"> ➤ C3 - Bradycardia ➤ S2 – WMD / Nerve Agent <p>Indications:</p> <ul style="list-style-type: none"> • Anticholinergic drug used in bradycardias. • In Organophosphate toxicity, large doses may be required. 	<p style="text-align: center;"><u>Bradycardia</u></p> <ul style="list-style-type: none"> • 0.5 - 1.0 mg IV/IO every 3 - 5 minutes. MAX DOSE = 3 mg. <p style="text-align: center;"><u>Organophosphate</u></p> <ul style="list-style-type: none"> • 1 - 2 mg IV/IM or as per medical control <p style="text-align: center;">P</p>	<p style="text-align: center;"><u>Organophosphate</u></p> <ul style="list-style-type: none"> • 0.02 mg/kg IV/IO or otherwise as per medical control <p style="text-align: center;">P</p>
<p><u>Calcium Chloride</u></p> <p>Protocol:</p> <ul style="list-style-type: none"> ➤ C6 – Cardiac Arrest Critical Thinking ➤ Ped8 – Pediatric Cardiac Arrest Critical Thinking <p>Indications:</p> <ul style="list-style-type: none"> • Indicated for severe hyperkalemia or hypermagnesemia, calcium channel blocker overdose. <p>Contraindications:</p> <ul style="list-style-type: none"> • Avoid use if patient is taking digoxin. 	<ul style="list-style-type: none"> • 1 gm IV/IO slowly <p style="text-align: center;">P</p>	<ul style="list-style-type: none"> • 20 mg/kg IV/IO slowly <p style="text-align: center;">P</p>
<p><u>Cardiac Electrical Intervention</u></p> <p>Protocol:</p> <ul style="list-style-type: none"> ➤ C3 - Bradycardia ➤ C4 – SVT / Wide Complex Tachycardia ➤ C5 – Cardiac Arrest ➤ Ped4 – Pediatric Bradycardia ➤ Ped7 – Pediatric Cardiac Arrest ➤ Ped9 – Pediatric SVT <p>Indications:</p> <ul style="list-style-type: none"> • Unstable cardiac dysrhythmias 	<p style="text-align: center;"><u>Perfusionless V. Fib/V.Tach:</u></p> <ul style="list-style-type: none"> • 200 j initially. • 300 j secondary. • 360 j subsequently. • <p style="text-align: center;"><u>Synchronized:</u></p> <ul style="list-style-type: none"> • 100 j initially. • 200 j subsequently or in wide QRS initially. <p style="text-align: center;"><u>Pacing:</u></p> <ul style="list-style-type: none"> • 80 mA at 80 bpm initially titrate mA up capture and SBP > 90. <p style="text-align: center;">P</p>	<p style="text-align: center;"><u>Perfusionless V. Fib/V.Tach:</u></p> <ul style="list-style-type: none"> • 2 j/kg initially. • 4 j/kg subsequently. <p style="text-align: center;"><u>Synchronized:</u></p> <ul style="list-style-type: none"> • 1 j/kg initially. • 2 j/kg subsequently or in wide QRS initially. <p style="text-align: center;">P</p>

Medications

Medication	Adult	Pediatric
<p><u>Dextrose 10% Glucose</u></p> <p>Protocol:</p> <ul style="list-style-type: none"> ➤ Ped7 – Pediatric Cardiac Arrest ➤ Ped8 – Pediatric Cardiac Arrest Critical Thinking ➤ M2 – Altered Mental Status <p>Indications:</p> <ul style="list-style-type: none"> • Use in unconscious or hypoglycemic states 	<ul style="list-style-type: none"> • Wide open IV/IO until patient is fully alert to normal and BGL is normal • Draw 50 cc's of NS out of a 250 cc bag of NS and add 50 cc's of Dextrose 50% to produce 10% solution. <p style="text-align: center;">A</p>	<ul style="list-style-type: none"> • 2-10 cc/kg IV/IO starting at low dose • Repeat based on blood glucose results • Draw 4 cc's of Dextrose 50% into a 20 cc syringe along with 16 cc's NS to produce 10% solution. <p style="text-align: center;">A</p>
<p><u>Dextrose 50% Glucose</u></p> <p>Protocol:</p> <ul style="list-style-type: none"> ➤ C6 – Cardiac Arrest Critical Thinking <p>Indications:</p> <ul style="list-style-type: none"> • Use in unconscious or hypoglycemic states 	<ul style="list-style-type: none"> • 25 gm IV/IO • Repeat based on blood glucose results <p style="text-align: center;">A</p>	<p>∅</p>
<p><u>Diltiazem (Cardizem)</u> Calcium Channel Blocker</p> <p>Protocol:</p> <ul style="list-style-type: none"> ➤ C4 – SVT / Wide Complex Tachycardia <p>Indications:</p> <ul style="list-style-type: none"> • Calcium channel blocker used to treat narrow complex SVT • Indicated for A. Fib with RVR – use caution as severe hypotension can result 	<ul style="list-style-type: none"> • 0.25 mg/kg IV/IO slow push MAX DOSE = 20 mg. <p style="text-align: center;">P</p>	<p>∅</p>
<p><u>Diphenhydramine (Benadryl)</u></p> <p>Protocol:</p> <ul style="list-style-type: none"> ➤ P2 – Allergic Reaction <p>Indications:</p> <ul style="list-style-type: none"> • Antihistamine for control of allergic reactions. <p>Contraindications:</p> <ul style="list-style-type: none"> • Do not give in infants < 3 mo. 	<ul style="list-style-type: none"> • 25-50 mg IV/IO/IM/PO <p style="text-align: center;">P</p>	<ul style="list-style-type: none"> • 1 mg/kg IV/IO/IM/PO MAX DOSE = 25 mg <p style="text-align: center;">P</p>

Medications

Medication	Adult	Pediatric
<p><u>Epinephrine 1:1,000</u></p> <p>Protocol:</p> <ul style="list-style-type: none"> ➤ P1 – Respiratory Distress ➤ P2 – Allergic Reaction ➤ Ped9 – Pediatric Respiratory Distress <p>Indications:</p> <ul style="list-style-type: none"> • Vasopressor used in allergic reactions or anaphylaxis 	<ul style="list-style-type: none"> • 0.3 mg IM (if age < 50 yrs) • 0.15 mg IM (if age > 50 yrs) <p><u>Nebulized Epinephrine</u></p> <ul style="list-style-type: none"> • 1 mg mixed with 2 cc of Normal Saline <p style="text-align: center;">A</p>	<ul style="list-style-type: none"> • 0.01 mg/kg IM MAX DOSE = 0.3 mg <p><u>Nebulized Epinephrine</u></p> <ul style="list-style-type: none"> • 1 mg mixed with 2 cc of Normal Saline <p style="text-align: center;">A</p>
<p><u>Epinephrine 1:100,000</u></p> <p>Protocol:</p> <ul style="list-style-type: none"> ➤ Gen1 – Venous Access / Hypotension ➤ C5 – Cardiac Arrest ➤ C6 – Cardiac Arrest Critical Thinking <p>Indications:</p> <p>Vasopressor used in hypotensive shock & cardiac arrest.</p>	<p><u>Cardiac Arrest</u></p> <ul style="list-style-type: none"> • Add 1 cc of Epi 1:1,000 to 100 cc of normal saline, administer wide open • Repeat as necessary every 3-5 minutes <p><u>Hypotension</u></p> <ul style="list-style-type: none"> • Prepare 1 cc of Epi 1:1,000 to 100 cc of normal saline, draw doses from mix • Dose: 10-20 mcg boluses (1-2 cc) every 2 - 5 minutes titrate to a MAP greater than 65mmHg • MAP = $\frac{\text{Systolic} + 2(\text{diastolic})}{3}$ <p style="text-align: center;">P</p>	<p><u>Cardiac Arrest</u></p> <ul style="list-style-type: none"> • Add 1 cc of Epi 1:1,000 to 100 cc of normal saline, administer 10 mcg/kg (1 cc/kg) • Repeat as necessary every 3-5 minutes <p style="text-align: center;">P</p>
<p><u>Etomidate (Amidate)</u></p> <p>Protocol:</p> <ul style="list-style-type: none"> ➤ A3 – Airway: Drug Assisted Intubation <p>Indications:</p> <ul style="list-style-type: none"> • Hypnotic used in Drug Assisted Intubation 	<ul style="list-style-type: none"> • 0.3 mg/kg IV/IO MAX DOSE = 20 mg <p style="text-align: center;">P</p>	<p>∅</p>

Medications

Medications


Medication	Adult	Pediatric
<p>Fentanyl (Sublimaze)</p> <p>Protocol: ➤ G2 – Pain Control</p> <p>Indications:</p> <ul style="list-style-type: none"> Narcotic pain relief <p>Contraindications:</p> <ul style="list-style-type: none"> Avoid use if BP < 110 	<ul style="list-style-type: none"> 50 - 100 mcg IV/IO/IM/IN then 25-50 mcg IV/IO/IM/IN every 20-30 minutes as needed, not to exceed max dose. MAX DOSE = 100 mcg <p style="text-align: center;">P</p>	<ul style="list-style-type: none"> 1 - 2 mcg/kg IV/IO/IM single dose only. MAX DOSE = 50 mcg 0.5 - 2 mcg/kg IN. MAX DOSE = 100 mcg <p style="text-align: center;">P</p>
<p>Furosemide (Lasix)</p> <p>Protocol: ➤ P1 – Respiratory Distress</p> <p>Indications:</p> <ul style="list-style-type: none"> Diuretic for pulmonary edema or CHF; has no proven benefit in prehospital care 	<ul style="list-style-type: none"> 20 mg IV/IO or dose to equal patient's normal single home PO dose MAX DOSE = 160 mg <p style="text-align: center;">P</p>	<p>∅</p>
<p>Glucagon</p> <p>Protocol: ➤ M2 – Altered Mental Status</p> <p>Indications:</p> <ul style="list-style-type: none"> Drug acting to release glucose into blood stream by glycogen breakdown Use in patients with no IV access 	<ul style="list-style-type: none"> 1 mg IM Follow-up blood glucose in 15 minutes, if result < 60, repeat dose. <p style="text-align: center;"><u>Beta blocker overdose</u></p> <ul style="list-style-type: none"> 0.05 mg/kg IV/IO <p style="text-align: center;">A</p>	<ul style="list-style-type: none"> Age > 3 years 0.5 mg IM if < 25 kg 1 mg IM if > 25 kg Follow-up blood glucose in 15 minutes, if result < 60, repeat dose. <p style="text-align: center;">A</p>
<p>Glucose, Oral</p> <p>Protocol: ➤ M2 - Altered Mental Status</p> <p>Indications:</p> <ul style="list-style-type: none"> Use in conscious hypoglycemic states only if patient is able to swallow on command 	<ul style="list-style-type: none"> One tube PO Repeat based on blood glucose results <p style="text-align: center;">B</p>	<ul style="list-style-type: none"> One tube PO Repeat based on blood glucose results Age > 3 years <p style="text-align: center;">B</p>
<p>Ketamine</p> <p>Protocol: ➤ G2 – Pain Control ➤ G4 – Behavioral</p> <p>Indications:</p> <ul style="list-style-type: none"> Use in patients with suspected agitated delirium. Use in patients with significant painful traumatic injury to control pain. 	<p style="text-align: center;"><u>Agitated Delirium</u></p> <ul style="list-style-type: none"> 1 mg/kg IV/IO 3 mg/kg IM/IN <p style="text-align: center;"><u>Pain Control</u></p> <ul style="list-style-type: none"> 20 mg IV/IO 50 mg IM/IN <p style="text-align: center;">P</p>	<p>∅</p>

Medications


Medications

Medication	Adult	Pediatric
<p><u>Ketorolac (Toradol)</u> Non-steroidal Anti-inflammatory Drug</p> <p>Protocol:</p> <ul style="list-style-type: none"> ➤ G2 – Pain Control ➤ M1 – Abdominal / Back Pain & Nausea <p>Indications:</p> <ul style="list-style-type: none"> • A nonsteroidal anti-inflammatory drug used for pain control. <p>Contraindications:</p> <ul style="list-style-type: none"> • Not to be used in patients with history of GI bleeding (ulcers), renal insufficiency, or in patients who may need immediate surgical intervention (i.e. obvious fractures). • Not to be used in patients with allergies to aspirin or other NSAIDs. • Avoid in patients currently taking anticoagulants such as Coumadin 	<ul style="list-style-type: none"> • 30 mg IV/IO or 60 mg IM <p style="text-align: center;">P</p>	<p style="text-align: center; font-size: 2em;">∅</p>
<p><u>Labetalol (Trandate)</u></p> <p>Protocol:</p> <ul style="list-style-type: none"> ➤ C2 – Hypertension <p>Indications:</p> <ul style="list-style-type: none"> ☒ Hypertensive emergency ☒ MEDICAL CONTROL ONLY <p>Contraindications:</p> <ul style="list-style-type: none"> ☒ In the setting of hypertensive emergency consider nitroglycerin first. 	<ul style="list-style-type: none"> • 20 mg Labetalol IV one time is approved without medical direction if the protocol criteria are met. • MAX DOSE = 300 mg • MEDICAL CONTROL AFTER INITIAL DOSE <p style="text-align: center;">P</p>	<ul style="list-style-type: none"> • 0.3 – 1 mg/kg/dose IV/IO as directed per medical control. • MEDICAL CONTROL ONLY <p style="text-align: center;">M</p>
<p><u>Lidocaine</u></p> <p>Protocol:</p> <ul style="list-style-type: none"> ➤ A3 – Airway: Drug Assisted Intubation ➤ C4 – SVT / Wide Complex Tachycardia ➤ C6 – Cardiac Arrest Critical Thinking ➤ Ped8 – Pediatric Cardiac Arrest Critical Thinking <p>Indications:</p> <ul style="list-style-type: none"> • Only use in cardiac if Amiodarone is unavailable. • Antiarrhythmic used for control of ventricular dysrhythmias. • Anesthetic used during intubation to prevent elevated intracranial pressures during intubation. <p>Contraindications:</p> <ul style="list-style-type: none"> • DO NOT INFUSE 	<p style="text-align: center;"><u>Cardiac Arrhythmia</u></p> <ul style="list-style-type: none"> • 1.5 mg/kg IV/IO. • Initial Dose 0.75 mg/kg if age > 60 years. • Repeat 1/2 initial dose in 10 minutes. <p style="text-align: center;"><u>Drug Assisted Intubation</u></p> <ul style="list-style-type: none"> • 1 mg/kg IV/IO. <p style="text-align: center;"><u>Conscious IO Start</u></p> <ul style="list-style-type: none"> • Up to 2 cc's prior to IO fluid administration. <p style="text-align: center;">P</p>	<ul style="list-style-type: none"> • 1 mg/kg IV/IO. • Repeat 1/2 initial dose in 10 minutes. <p style="text-align: center;">P</p>

Medications

Medication	Adult	Pediatric
<p><u>Magnesium Sulfate</u></p> <p>Protocol:</p> <ul style="list-style-type: none"> ➤ P1 – Respiratory Distress ➤ C4 – SVT / Wide Complex Tachycardia ➤ C6 – Cardiac Arrest Critical Thinking ➤ Ped1 – Childbirth / Labor ➤ Ped3 – Obstetrical Emergency <p>Indications:</p> <ul style="list-style-type: none"> • Cardiac arrest presenting with Torsades de pointes • Elemental electrolyte used to treat eclampsia during the third trimester of pregnancy. 	<p><u>Eclampsia/Tocolytic</u></p> <ul style="list-style-type: none"> • 2-6 g IV/IO in 50cc NS over not less than 10 minutes. • Monitor for respiratory insufficiency. <p><u>Torsades de pointes</u></p> <ul style="list-style-type: none"> • 1-2 g IV/IO slow push. • May be repeated once in 5 minutes if needed. <p style="text-align: center;">P</p>	
<p><u>Methylprednisolone (Solu-medrol)</u> Steroid Preparation</p> <p>Protocol:</p> <ul style="list-style-type: none"> ➤ P1 – Respiratory Distress ➤ P2 – Allergic Reaction ➤ Ped9 – Pediatric Respiratory Distress <p>Indications:</p> <ul style="list-style-type: none"> • Steroid used to reverse inflammatory and allergic reactions with respiratory distress. 	<ul style="list-style-type: none"> • 125 mg IV/IO. • Post administration blood glucose required. <p style="text-align: center;">P</p>	<ul style="list-style-type: none"> • 2 mg/kg IV/IO. MAX DOSE = 125 mg • Post administration blood glucose required. <p style="text-align: center;">P</p>
<p><u>Midazolam (Versed)</u> Benzodiazepine</p> <p>Protocol:</p> <ul style="list-style-type: none"> ➤ G4 – Behavioral ➤ A1 – Airway: Adult ➤ A4 – Airway: Pediatric ➤ C4 – SVT / Wide Complex Tachycardia ➤ Ped3 – Obstetrical Emergency ➤ Ped10 – Pediatric Seizure ➤ Ped11 – Pediatric SVT ➤ M4 – Seizure ➤ S2 – WMD / Nerve Agent <p>Indications:</p> <ul style="list-style-type: none"> • Benzodiazepine used to control seizures and sedation • Quick acting Benzodiazepine. <p>Contraindications:</p> <ul style="list-style-type: none"> • Avoid use if BP < 110 	<ul style="list-style-type: none"> • 0.5 - 2.5 mg IV/IO/IM slow-push over 2 minutes as needed. MAX DOSE = 5 mg • 2 - 5 mg IN as needed. MAX DOSE = 5 mg <p style="text-align: center;">P</p>	<ul style="list-style-type: none"> • 0.1 - 0.2 mg/kg IV/IO slow-push over 2 minutes. MAX DOSE = 2 mg • 0.2 mg/kg IN. • MAX DOSE = 2 mg <p style="text-align: center;">P</p>




Medications

Medication	Adult	Pediatric
<p><u>Morphine Sulfate</u></p> <p>Protocol:</p> <ul style="list-style-type: none"> > G2 – Pain Control > C1 – Chest Pain: Cardiac and STEMI > C2 – Hypertension <p>Indications:</p> <ul style="list-style-type: none"> • Narcotic pain relief <p>Contraindications:</p> <ul style="list-style-type: none"> • Avoid use if BP < 110 	<ul style="list-style-type: none"> • 2 - 5 mg IV/IO/IM, repeat after 5 - 10 minutes as needed. • MAX DOSE = 10 mg <p style="text-align: center;">P</p>	<ul style="list-style-type: none"> • 0.1 mg/kg IV/IO single dose only. MAX DOSE = 5 mg <p style="text-align: center;">P</p>
<p><u>Naloxone (Narcan)</u></p> <p>Protocol:</p> <ul style="list-style-type: none"> > M2 – Altered Mental Status > M3 – Overdose / Toxic Ingestion > C6 – Cardiac Arrest Critical Thinking <p>Indications:</p> <ul style="list-style-type: none"> • Narcotic antagonist 	<ul style="list-style-type: none"> • 0.5 - 2 mg IV/IO/IM/IN. <p style="text-align: center;">A</p> <ul style="list-style-type: none"> • 0.5 - 2 mg IN <p style="text-align: center;">EMR</p>	<ul style="list-style-type: none"> • 0.1 mg/kg IV/IO/IN. MAX DOSE = 2 mg <p style="text-align: center;">A</p> <ul style="list-style-type: none"> • 0.1 mg/kg IN. MAX DOSE = 2 mg <p style="text-align: center;">EMR</p>
<p><u>Nitroglycerin</u></p> <p>Protocol:</p> <ul style="list-style-type: none"> > P1 – Respiratory Distress > C1 – Chest Pain: Cardiac and STEMI > C2 – Hypertension <p>Indications:</p> <ul style="list-style-type: none"> • Vasodilator used in anginal syndromes for pain, CHF and Hypertension. <p>Contraindications:</p> <ul style="list-style-type: none"> • If SBP < 110, contact MEDICAL CONTROL. 	<p style="text-align: center;"><u>Chest Pain</u></p> <ul style="list-style-type: none"> • 1 tablet SL every 5 minutes for pain as needed. MAX DOSE = 3 tablets. <p style="text-align: center;"><u>Pulmonary Edema / Hypertension</u></p> <ul style="list-style-type: none"> • 1 tablet SL every 5 minutes as needed. <p style="text-align: center;">A</p>	
<p><u>Normal Saline</u> <u>Crystalloid Solution</u></p> <p>Protocol:</p> <ul style="list-style-type: none"> > G1 – Venous Fluids / Access > P1 – Respiratory Distress > Ped9 – Pediatric Respiratory Distress > T2 – Burn Algorithm > T6 – Hypothermia <p>Indications:</p> <ul style="list-style-type: none"> • The IV fluid of choice for venous access or volume infusion 	<ul style="list-style-type: none"> • KVO = 100 cc/hr IV/IO. • Bolus = 500 cc IV/IO or sufficient volume to restore radial pulse, MAP of 65 mm Hg. <p style="text-align: center;"><u>Nebulizer</u></p> <ul style="list-style-type: none"> • 3 cc in Nebulizer. <p style="text-align: center;">A</p>	<ul style="list-style-type: none"> • Bolus = 20 cc/kg IV/IO. • Repeat x3 as needed to maintain appropriate blood pressure for age. <p style="text-align: center;"><u>Nebulizer</u></p> <ul style="list-style-type: none"> • 3 cc in Nebulizer. <p style="text-align: center;">A</p>

Medications


Medication	Adult	Pediatric
<p><u>Ondansetron (Zofran)</u> Anti-emetic</p> <p>Protocol:</p> <ul style="list-style-type: none"> ➤ C1 – Chest Pain: Cardiac and STEMI ➤ M1 – Abdominal / Back Pain & Nausea <p>Indications:</p> <ul style="list-style-type: none"> • Anti-emetic used to control Nausea and/or Vomiting • Ondansetron (Zofran) is the recommended Anti-emetic for EMS since it is associated with significantly less side effects and sedation. <p>Contraindications:</p> <ul style="list-style-type: none"> • May cause increase in QT duration. Use with caution in patients with known or suspect prolonged QT syndrome. 	<ul style="list-style-type: none"> • 4 mg IV/IO/IM/PO. MAX DOSE = 4 mg <p style="text-align: center;">P</p>	<ul style="list-style-type: none"> • 0.15 mg/kg IV/IO/IM. MAX DOSE = 4 mg <p style="text-align: center;">P</p>
<p><u>Oxygen</u></p> <p>Protocol:</p> <ul style="list-style-type: none"> ➤ A1 – Airway: Adult ➤ A4 – Airway: Pediatric ➤ P1 – Respiratory Distress ➤ P2 – Allergic Reaction ➤ Ped9 – Pediatric Respiratory Distress <p>Indications:</p> <ul style="list-style-type: none"> • Useful in any condition with cardiac work load, respiratory distress, or illness/injury resulting in altered ventilation and/or perfusion. • Required for pre-oxygenation whenever possible prior to advanced airways. 	<ul style="list-style-type: none"> • 1 - 6 lpm via nasal cannula. • 6 lpm via Nebulizer (EMT-B). • 15 lpm via NRB mask. • 15 lpm via BVM. • Direct connect for CPAP • NO MAX DOSE <p style="text-align: center;">EMR</p>	<ul style="list-style-type: none"> • 1 - 6 lpm via nasal cannula. • 6 lpm via Nebulizer (EMT-B). • 15 lpm via NRB mask. • 15 lpm via BVM. • NO MAX DOSE <p style="text-align: center;">EMR</p>
<p><u>Oxytocin (Pitocin)</u></p> <p>Protocol:</p> <ul style="list-style-type: none"> ➤ Other: Childbirth Procedure <p>Indications:</p> <ul style="list-style-type: none"> • Used for post-partum hemorrhage refractory to fundal massage. 	<ul style="list-style-type: none"> • 10 units in 500 cc NS IV/IO over 10 min. <p style="text-align: center;">P</p>	<p>∅</p>

Medications

Medication	Adult	Pediatric
<p>Promethazine (Phenergan) Anti-emetic</p> <p>Protocol:</p> <ul style="list-style-type: none"> ➤ C1 – Chest Pain: Cardiac and STEMI ➤ M1 – Abdominal / Back Pain & Nausea <p>Indications:</p> <ul style="list-style-type: none"> • Anti-emetic used to control Nausea and/or Vomiting • Ondansetron (Zofran) is the recommended Anti-emetic for EMS use since it is associated with significantly less side effects and sedation. 	<ul style="list-style-type: none"> • 12.5 - 25 mg IM single dose only. • If age > 60 years, 12.5 mg IM <p style="text-align: center;">P</p>	
<p>Sodium Bicarbonate</p> <p>Protocol:</p> <ul style="list-style-type: none"> ➤ G4 – Behavioral ➤ C6 – Cardiac Arrest Critical Thinking ➤ Ped8 – Pediatric Cardiac Arrest Critical Thinking <p>Indications:</p> <ul style="list-style-type: none"> • A buffer used in acidosis to increase the pH in Cardiac Arrest due to hyperkalemia or Tricyclic Overdose. <p>Contraindications:</p> <ul style="list-style-type: none"> • Sodium Bicarbonate is NOT approved for routine use in cardiac arrest patients with asystole or PEA 	<ul style="list-style-type: none"> • 50 mEqV/IO then 25 mEqV/IO every 10 minutes as needed. <p><u>Tricyclic Overdose with cardiac collapse</u></p> <ul style="list-style-type: none"> • 50 mEqV/IO then 100 mEqn 1 liter NS INFUSE IV/IO at a rate of 200 cc/hr. <p style="text-align: center;">P</p>	<ul style="list-style-type: none"> • 1 cc/kg IV/IO then 0.5 cc/kg IV/IO every 10 minutes as needed. <p style="text-align: center;">P</p>
<p>Terbutaline</p> <p>Protocol:</p> <ul style="list-style-type: none"> ➤ Ped1 – Childbirth / Labor <p>Indications:</p> <ul style="list-style-type: none"> • Used as a potent tocolytic in the setting of complicated labor 	<ul style="list-style-type: none"> • 0.25 mg IM, repeat every 15 minutes. MAX DOSE = 1 mg • Usually given in conjunction with magnesium. <p style="text-align: center;">P</p>	
<p>Thiamine</p> <p>Protocol:</p> <ul style="list-style-type: none"> ➤ M2 – Altered Mental Status <p>Indications:</p> <ul style="list-style-type: none"> • Used to prevent Wernicke’s encephalopathy in patients with a history of alcohol dependence and hypoglycemia. 	<ul style="list-style-type: none"> • 100 mg IV/IO prior to the administration of Dextrose 50%. <p style="text-align: center;">P</p>	

Medications

Medications

Medication	Adult	Pediatric
<p><u>Tranexamic Acid (TXA)</u></p> <p>Protocol:</p> <p>➤ G7 – Bleeding Control</p> <p>Indications:</p> <ul style="list-style-type: none">• Antifibrinolytic used in the setting of hemorrhagic shock. May cause hypotension if administered at a rate faster than recommended.	<ul style="list-style-type: none">• 1 g in 100 cc of NS INFUSED IV/IO over 10 minutes. <p><u>Trauma Patients with suspected hypovolemia and:</u></p> <ul style="list-style-type: none">• A Systolic BP < 90 at any time or,• A respiratory rate > 30 or < 10 not improved with oxygen or,• A heart rate > 130. <p style="text-align: center;">P</p>	

Protocols

General

0. Patient Contact Decision Tree
1. Venous Access / Hypotension
2. Pain Control
3. Spinal Immobilization Clearance
4. Behavioral
5. Police Custody
6. Non-Emergency Transport
7. Bleeding Control
8. Patient Refusing Care

Airway

1. Airway: Adult
2. Airway: Adult, Failed
3. Airway: Drug Assisted Intubation
4. Airway: Pediatric
5. Airway: Pediatric, Failed

Pulmonary

1. Respiratory Distress
2. Allergic Reaction

Cardiac

1. Chest Pain: Cardiac and STEMI
2. Hypertension
3. Bradycardia
4. SVT / Wide Complex Tachycardia
5. Cardiac Arrest
6. Cardiac Arrest Critical Thinking
7. Post Resuscitation

Pediatric and OB

1. Childbirth / Labor
2. Newly Born
3. Obstetrical Emergency
4. Pediatric Bradycardia
5. Pediatric Head Trauma
6. Pediatric Multiple Trauma
7. Pediatric Cardiac Arrest
8. Pediatric Cardiac Arrest Critical Thinking
9. Pediatric Respiratory Distress
10. Pediatric Seizure
11. Pediatric Supraventricular Tachycardia

Medical

1. Abdominal / Back Pain & Nausea
2. Altered Mental Status
3. Overdose / Toxic Ingestion
4. Seizure
5. Suspected Stroke

Trauma

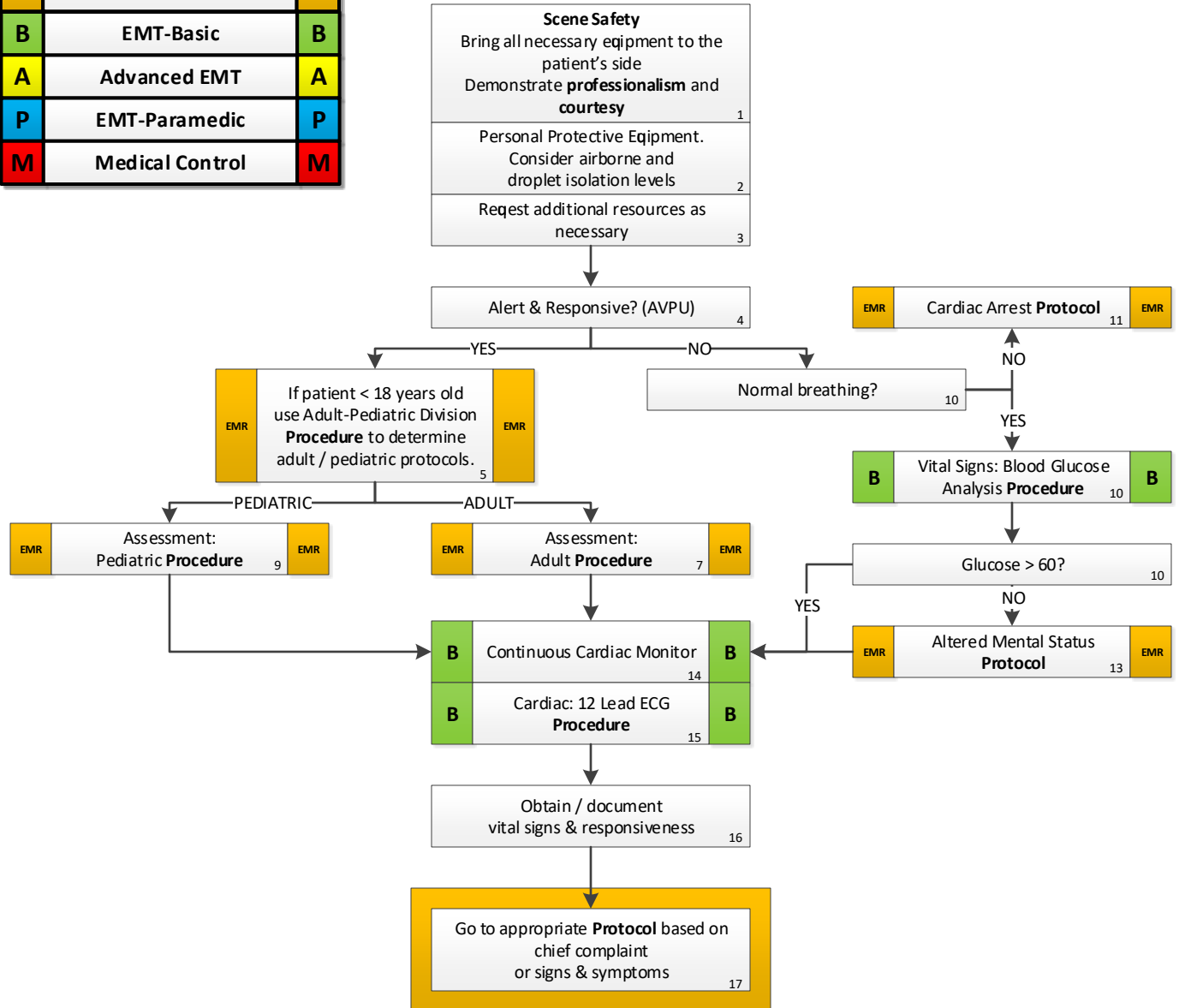
1. Bite / Envenomation
2. Burn Algorithm
3. Burn Pearls
4. Drowning
5. Hyperthermia
6. Hypothermia
7. Extremity Trauma
8. Head Trauma
9. Multiple / Core Trauma

Special Circumstances

1. Decontamination
2. WMD / Nerve Agent
3. EMS Triage and Destination Plan: STEMI
4. EMS Triage and Destination Plan: STROKE
5. EMS Triage and Destination Plan: TRAUMA
6. Monett Diversion Plan

Patient Contact Decision Tree

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P
M	Medical Control	M



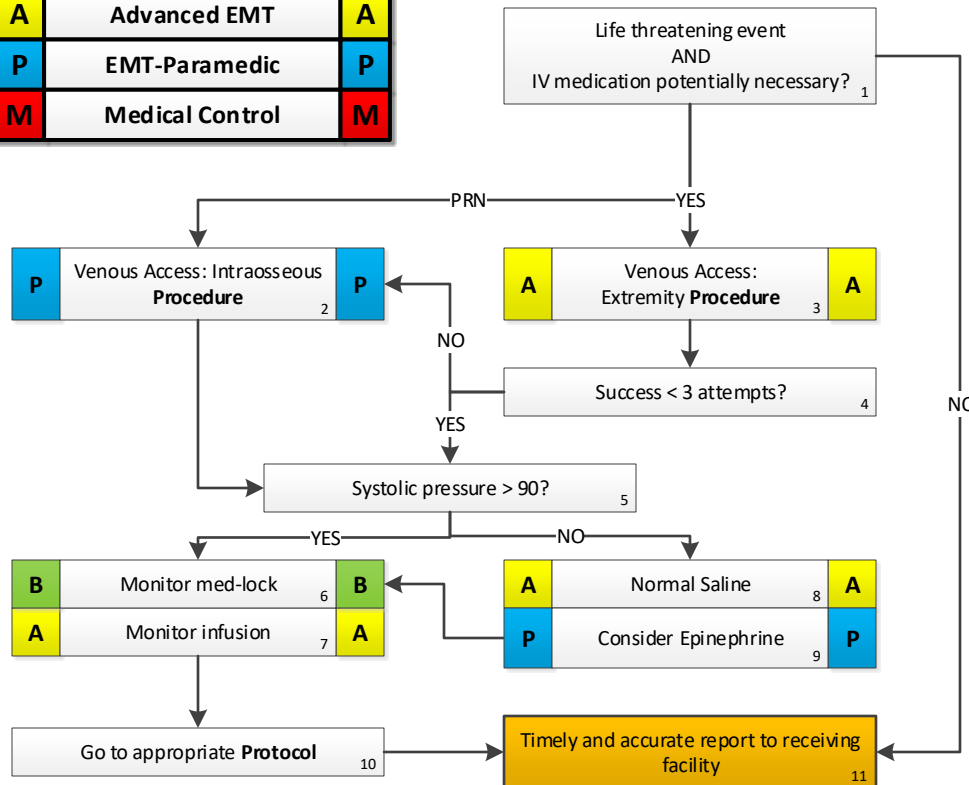
General Protocols

Pearls:

- Give as much notice to receiving facility as possible.
- Cardiac Monitor and 12 ECG can be applied at the Basic level – interpretation; however, is a Paramedic level skill; see License Scope Outline.
- Required vital signs include:
 - Blood pressure
 - Pulse
 - Respirations
 - Pulse oximetry
 - Pain / severity
- Special case vital signs include:
 - Blood Glucose (required whenever patients mental status is not Alert & Oriented or patient has a history of diabetes mellitus)
 - Temperature (required with suspected heat/cold related symptoms, infection, sepsis, pediatric seizure, and as appropriate)
 - If temperature is elevated consider airborne and droplet isolation precautions
 - ETCO2 (required with any advanced airway)
- AVPU is a digression responsiveness indicator as follows:
 - A-Alert and oriented, V-Alert to verbal stimuli, P-Alert to painful stimuli, U-Unresponsive
- Timing of transport should be based on patient's clinical condition and the transport policy.
- Never hesitate to contact medical control for patient who refuses transport.
- Vital Signs: Orthostatic Blood Pressure Measurement Procedure should be performed in situations where volume status is in question.

Venous Access / Hypotension

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P
M	Medical Control	M



Pearls:

- **Vital Signs: Orthostatic Blood Pressure Measurement Procedure should be performed in situations where volume status is in question.**
- **IV access represents a risk and should not be routinely performed, but should be considered when a specific intervention is indicated.**
- In the setting of cardiac arrest any preexisting dialysis shunt or external central venous catheter may be used.
- Avoid using accessing existing ports or shunts.
- A life threatening event is defined as:
 - Heart Rate > 120
 - Respiratory Rate > 30 or < 10
 - Systolic Blood Pressure < 90
 - Altered Level of Consciousness
- Any prehospital fluids or medications approved for IV use, may be given through an intraosseous IV.
- All IV rates should be at KVO (minimal rate to keep vein open) unless administering fluid bolus.
- Use micro drips for all patients 8 years old or less.
- Upper extremity IV sites are preferable to lower extremity sites.
- Lower extremity IV sites are discouraged in patients with vascular disease or diabetes.
- In post-mastectomy patients, avoid IV, blood draw, injection, or blood pressure in arm on affected side.
- No IV therapy has been shown to improve outcome in pre hospital patients. Do Not Delay Transport to initiate IV therapy.

Pain Control

History:

- Age
- Location
- Duration
- Severity (1 - 10)
- If child use Wong-Baker faces scale
- Past medical history
- Medications
- Drug allergies

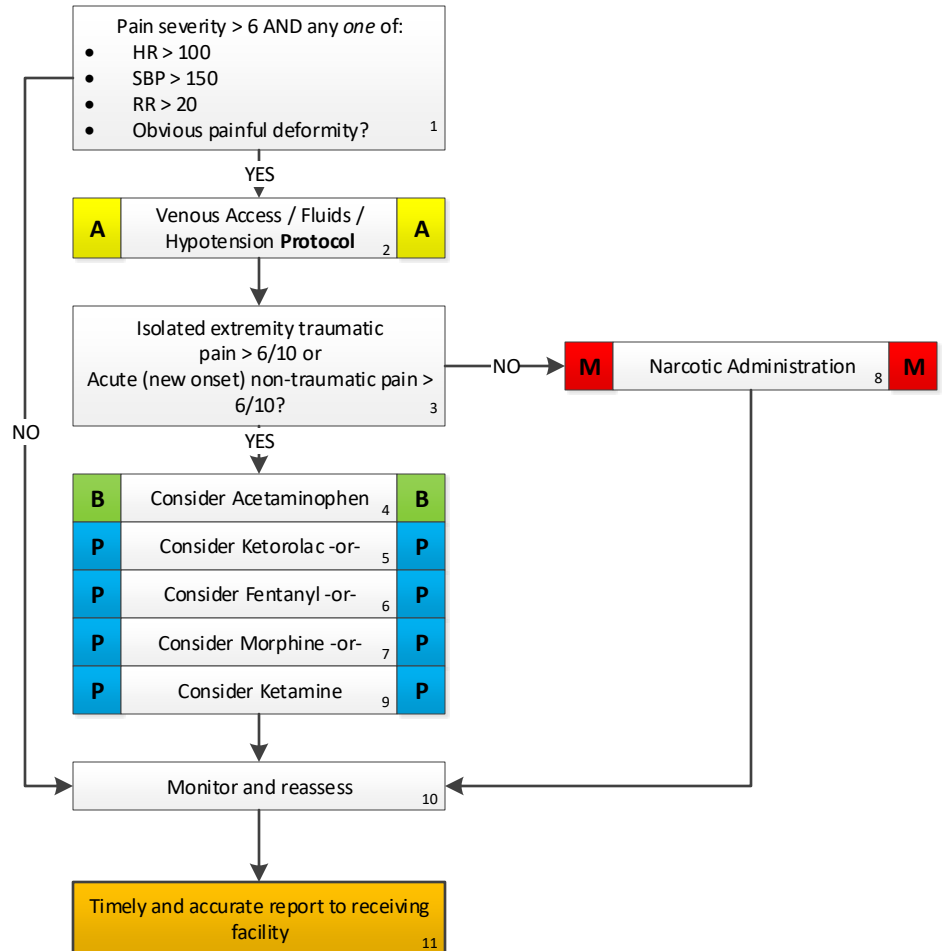
Signs & Symptoms:

- Severity (pain scale)
- Quality (sharp, dull, etc.)
- Radiation
- Relation to movement, respiration
- Increased with palpation of area

Differential:

- Per the specific protocol
- Musculoskeletal
- Visceral (abdominal)
- Cardiac
- Pleural / Respiratory
- Neurogenic
- Renal (colic)

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P
M	Medical Control	M

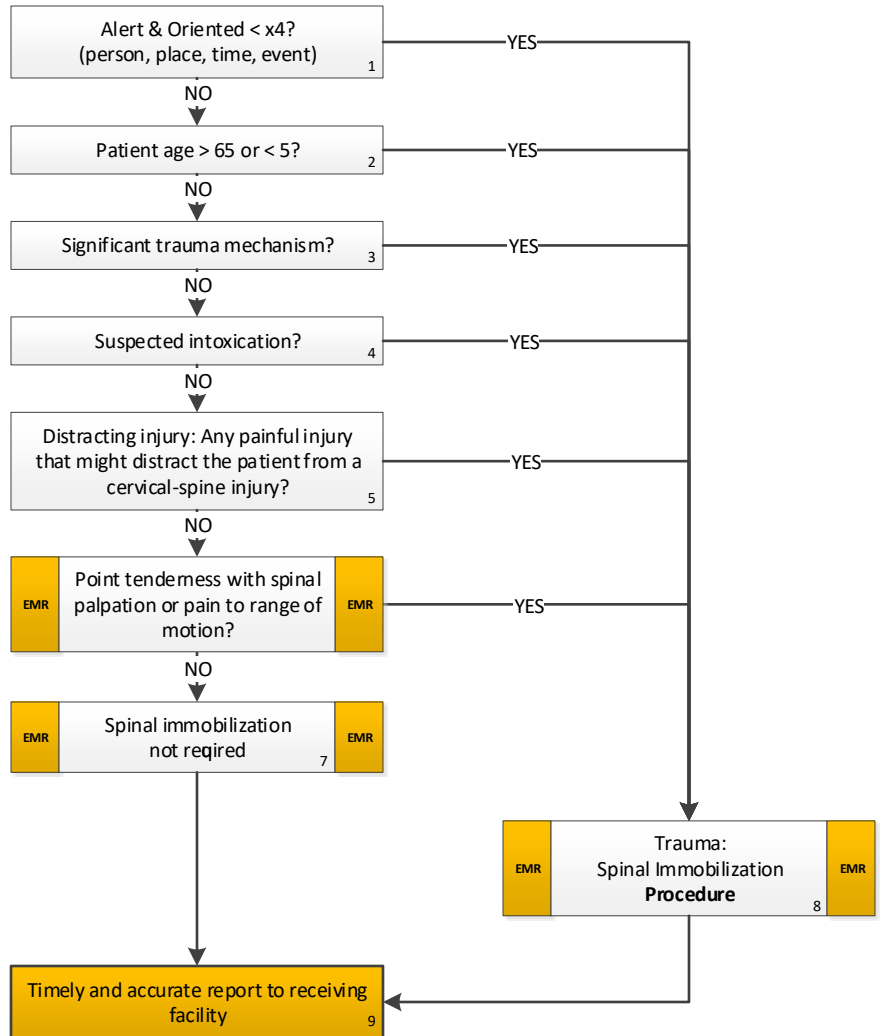


Pearls:

- **Recommended Exam: Mental Status, Area of Pain, Neuro**
- **A patient who is not able to state their pain level should not receive pain control medications.**
- **Pain control medications should not be used to treat chronic pain.**
- Pain severity (0-10) is a vital sign to be recorded pre and post medication delivery and at disposition.
- Vital signs should be obtained pre, 15 minutes post, and at disposition with all pain medications.
- Contraindications to Narcotic use include: hypotension, head injury, or respiratory depression.
- All patients should have drug allergies documented and avoid medications with a history of an allergy or reaction.
- All patients who receive IM or IV medications must be observed 15 minutes for drug reaction.
- NSAIDs should not be given if there is abdominal pain, history of gastritis, stomach ulcers, fracture, or if patient will require sedation.
- For pediatric patients with isolated pain, for whom an IV may be difficult or traumatic, administration of Fentanyl IN is permitted. Be prepared to assist ventilations.

Spinal Immobilization Clearance

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P
M	Medical Control	M



Pearls:

- **Recommended Exam: Mental Status, Skin, Neck, Heart, Lungs, Abdomen, Back, Extremities, Neuro**
- Consider immobilization in any patient with arthritis, cancer, or other underlying spinal or bone disease.
- Significant mechanism includes high-energy events such as ejection, high falls, and abrupt deceleration crashes and may indicate the need for spinal immobilization in the absence of symptoms.
- A C-Collar and long spine board are NOT required for proper immobilization, do not force patient to lay supine on a long board if further injury could result. Use other means to immobilize the spine and prevent further injury.
- The acronym "NSAIDS" should be used to remember the steps in this protocol:
 - **N** = Neurologic exam. Look for focal deficits such as tingling, reduced strength, or numbness in an extremity.
 - **S** = Significant mechanism or extremes of age.
 - **A** = Alertness. Is patient oriented to person, place, time, and situation? Any change to alertness with this incident?
 - **I** = Intoxication. Is there any indication that the person is intoxicated (impaired decision making ability)?
 - **D** = Distracting injury. Is there any other injury which is capable of producing significant pain in this patient?
 - **S** = Spinal exam. Look for point tenderness in any spinal process or spinal process tenderness with range of motion.
- The decision to NOT implement spinal immobilization in a patient is the responsibility of the paramedic.
- In very old and very young patients, a normal exam may not be sufficient to rule out spinal injury.

Behavioral

History:

- Situational crisis
- Psychiatric illness/medications
- Injury to self or threats to others
- Medic alert tag
- Substance abuse / overdose
- Diabetes

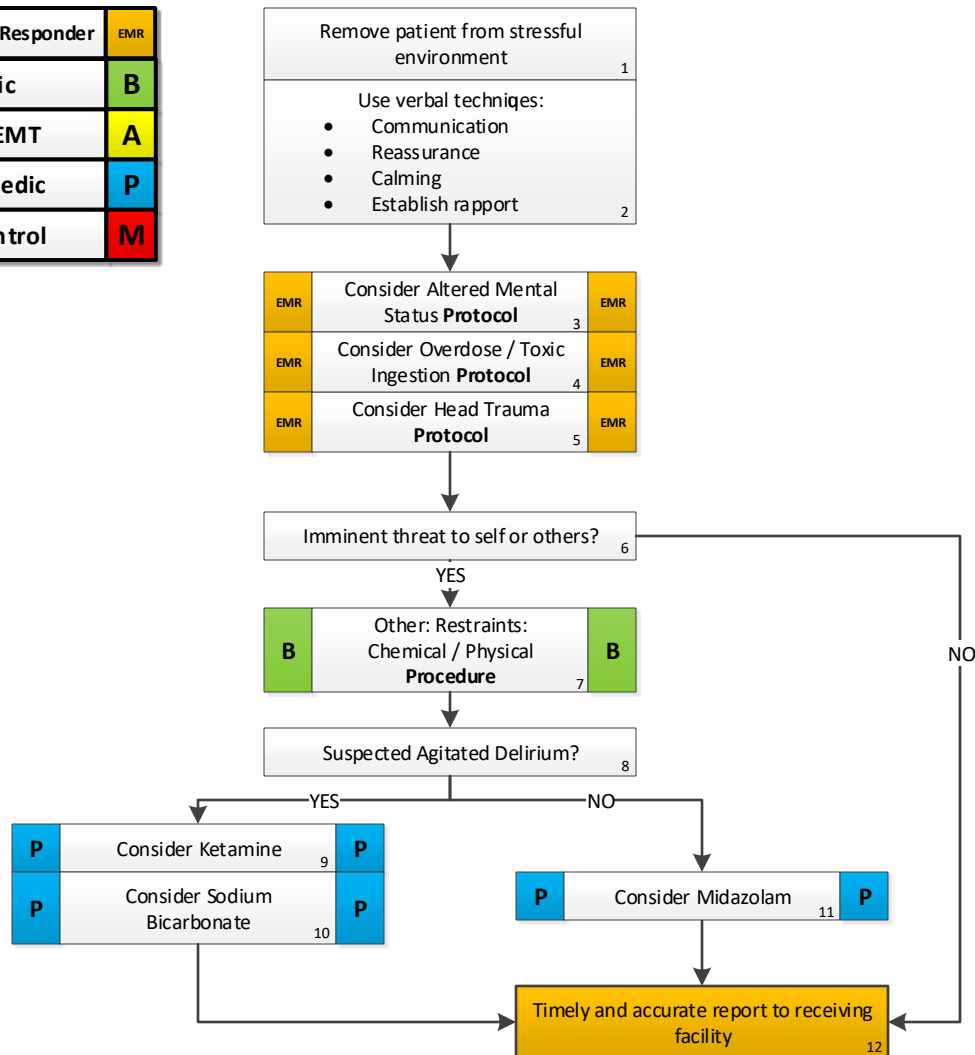
Signs & Symptoms:

- Anxiety, agitation, confusion
- Affect change, hallucinations
- Delusional thoughts, bizarre behavior
- Combative violent
- Expression of suicidal / homicidal thoughts

Differential:

- Reference Altered Mental Status **Protocol**
- Alcohol Intoxication
- Toxin / Substance abuse
- Medication effect / overdose
- Withdrawal syndromes
- Depression
- Bipolar (manic-depressive)
- Schizophrenia
- Anxiety disorders

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P
M	Medical Control	M



Pearls:

- **Recommended Exam: Mental Status, Skin, Heart, Lungs, Neuro**
- Consider benzodiazepine for patients with presumed substance abuse.
- Be sure to consider all possible medical/trauma causes for behavior (hypoglycemia, overdose, substance abuse, hypoxia, head injury, etc.)
- In a sedated patient or one who is suspected of suffering from an overdose an absolute end-tidal CO2 value of 50 mm Hg or an increase of >10 mm Hg over baseline may indicate respiratory depression.
- Do not irritate the patient with a prolonged exam.
- Do not overlook the possibility of associated domestic violence or child abuse.
- All patients who receive either physical or chemical restraint must be continuously observed by ALS
- Any patient who is handcuffed or restrained by Law Enforcement and transported by EMS must be accompanied by law enforcement in the ambulance.
- Do not position or transport any restrained patient in such a way that could impact the patients respiratory or circulatory status.

Police Custody

History:

- Traumatic Injury
- Drug Abuse
- Cardiac History
- History of Asthma
- Psychiatric History

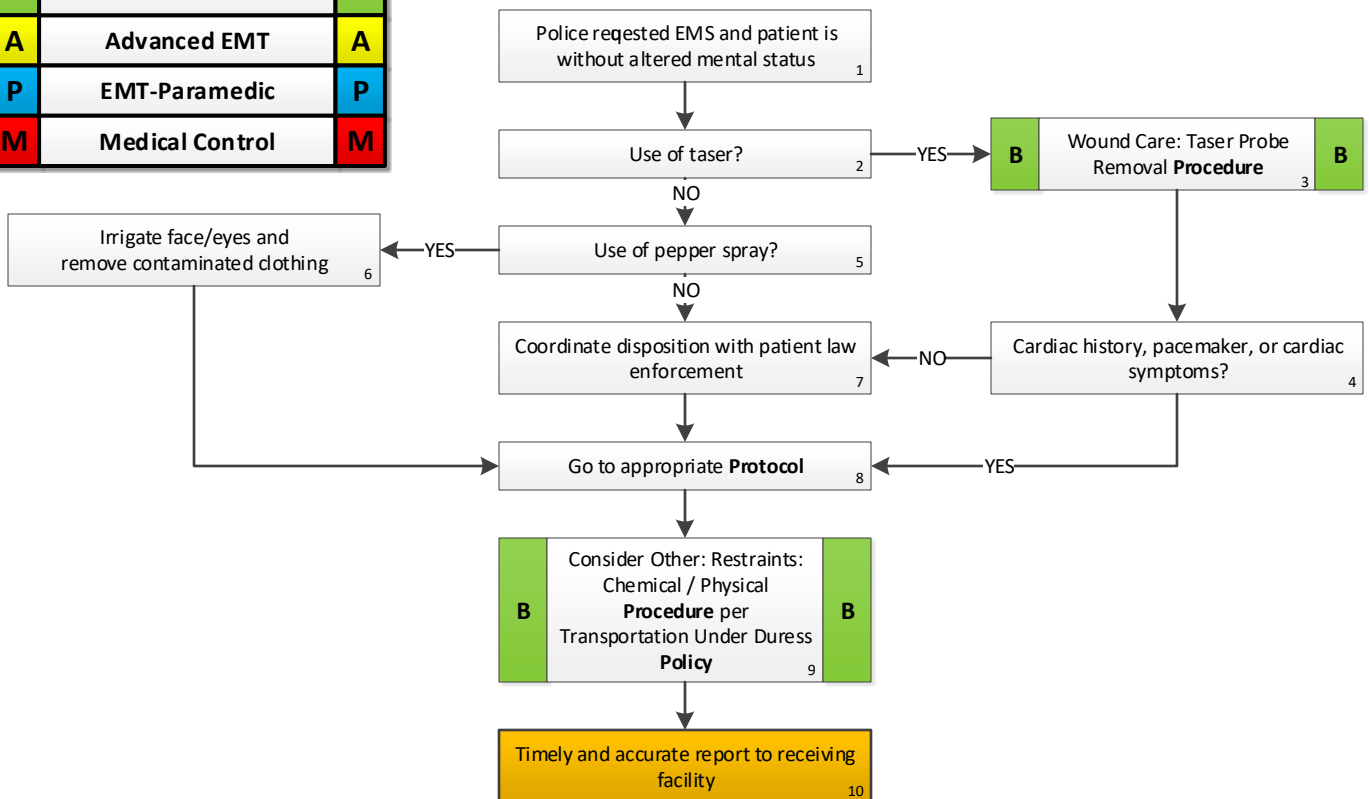
Signs & Symptoms:

- External signs of trauma
- Palpitations
- Shortness of breath
- Wheezing
- Intoxication/Substance Abuse

Differential:

- Traumatic Injury
- Asthma Exacerbation
- Cardiac Dysrhythmia

EMR	Emergency Medical Responder	EMR
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M	Medical Control	M



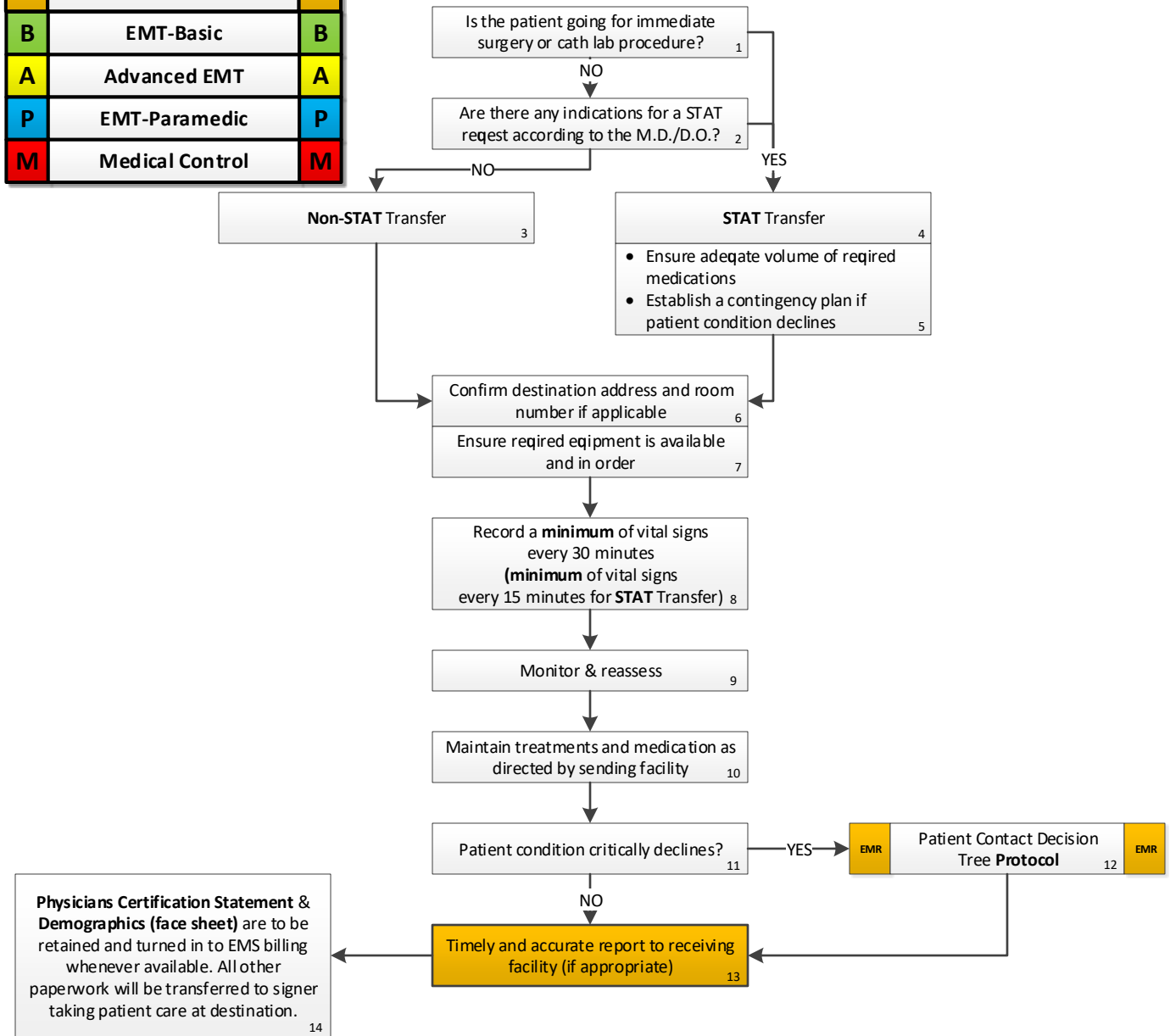
General Protocols

Pearls:

- **For this protocol to be used, the patient does not have to be under police custody.**
- Patients restrained by law enforcement devices cannot be transported in the ambulance without a law enforcement officer in the patient compartment who is capable of removing the devices.
- If an asthmatic patient is exposed to pepper spray and released to law enforcement, all parties should be advised to immediately contact EMS if wheezing/difficulty breathing occurs.
- All patients in police custody retain the right to request transport. This should be coordinated with law enforcement.

Non-Emergency Transport

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P
M	Medical Control	M

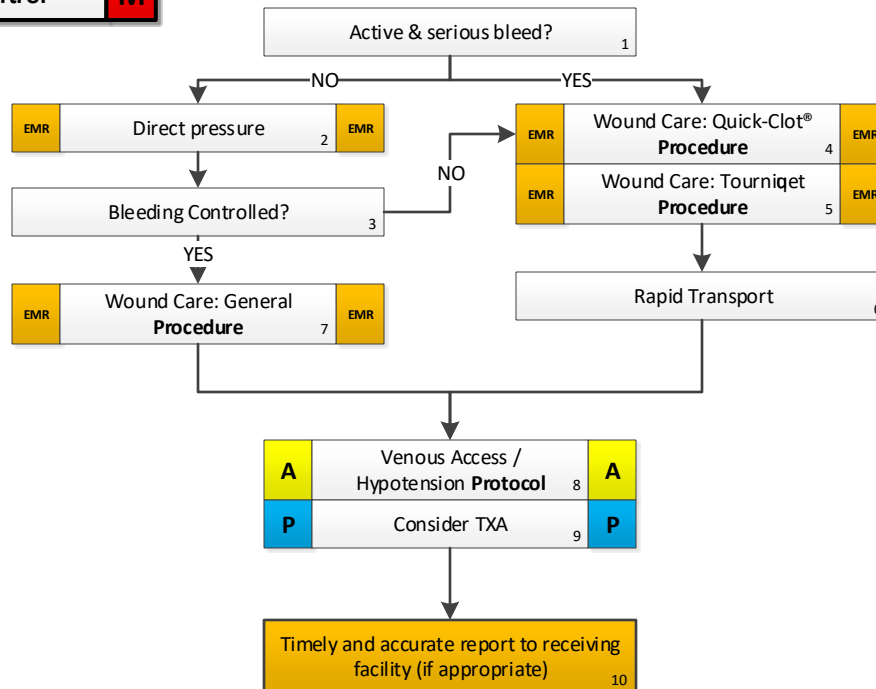


Pearls:

- **Recommended exam: Minimal exam includes vital signs, mental status with GCS, and location of injury or complaint.**
- SBAR information should be obtained from sending facility staff/care takers whenever possible:
 - Situation
 - Background
 - Assessment
 - Recommendations
- If a patient's condition declines below appropriate threshold obtained from SBAR the patient is now an emergent patient and must be transported to the closest appropriate facility or to a pre-determined emergency destination.
- Patients restrained by law enforcement devices cannot be transported in the ambulance without a law enforcement officer in the patient compartment who is capable of removing the devices.
- Interfacility patients will be monitored continuously for status changes.
- At no time is it appropriate for EMS personnel to sleep during transport unless a crew of 3 or more is present.
- All non-medical/law enforcement riders will remain buckled at all times while vehicle is in motion.
- For critically ill patients, non-medical riders should ride in a front cab seat if available; however this is at the discretion of EMS personnel.

Bleeding Control

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P
M	Medical Control	M

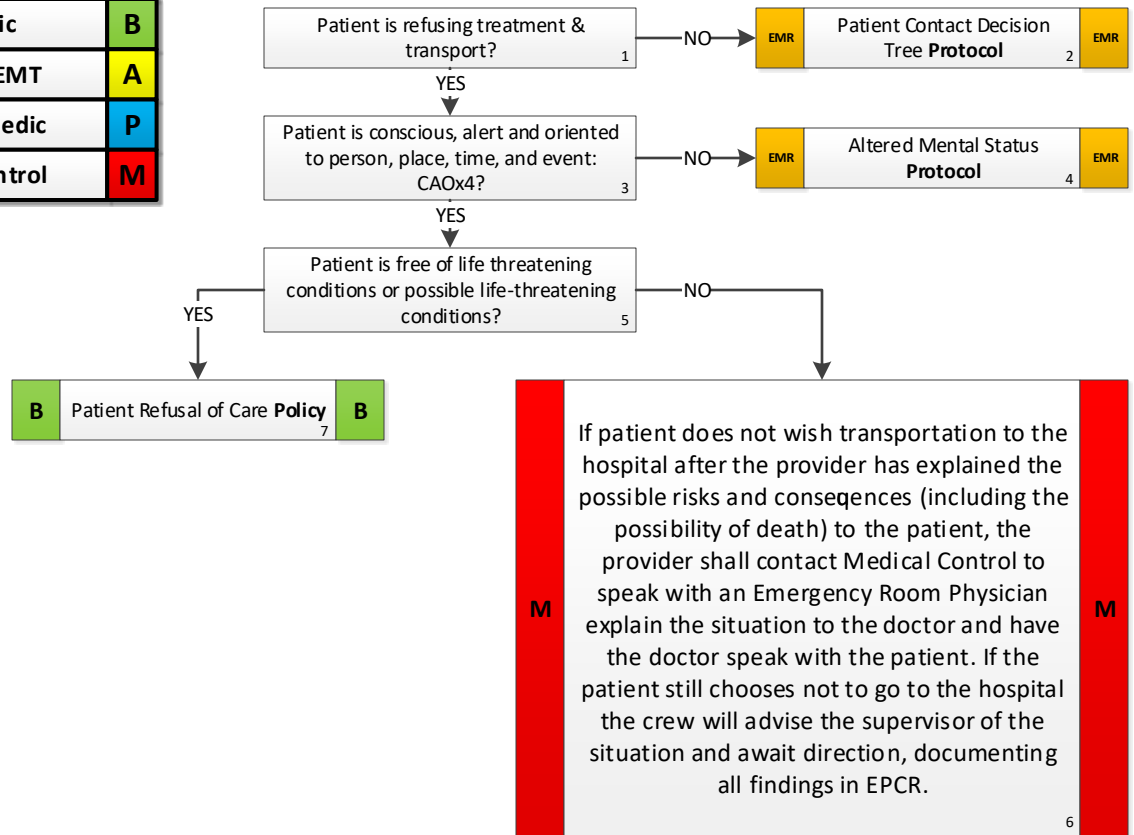


Pearls:

- **Serious arterial bleeding (audible / squirting) control supersedes airway as a life threat.**
- **Direct pressure may require significant pressure to control bleeding.**
- **Once bleeding is controlled, NEVER remove bandaging to 'look' at a wound.**
- Quick-Clot® must be placed at the site of the bleed i.e. the open vessel with pressure maintained for 3 minutes minimum.
- Tourniquets should be placed on the long bone above the injury and ideally use muscle to compress blood vessels. Never place a tourniquet on a joint.
- Give as much notice to receiving facility as possible.

Patient Refusal of Care

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P
M	Medical Control	M

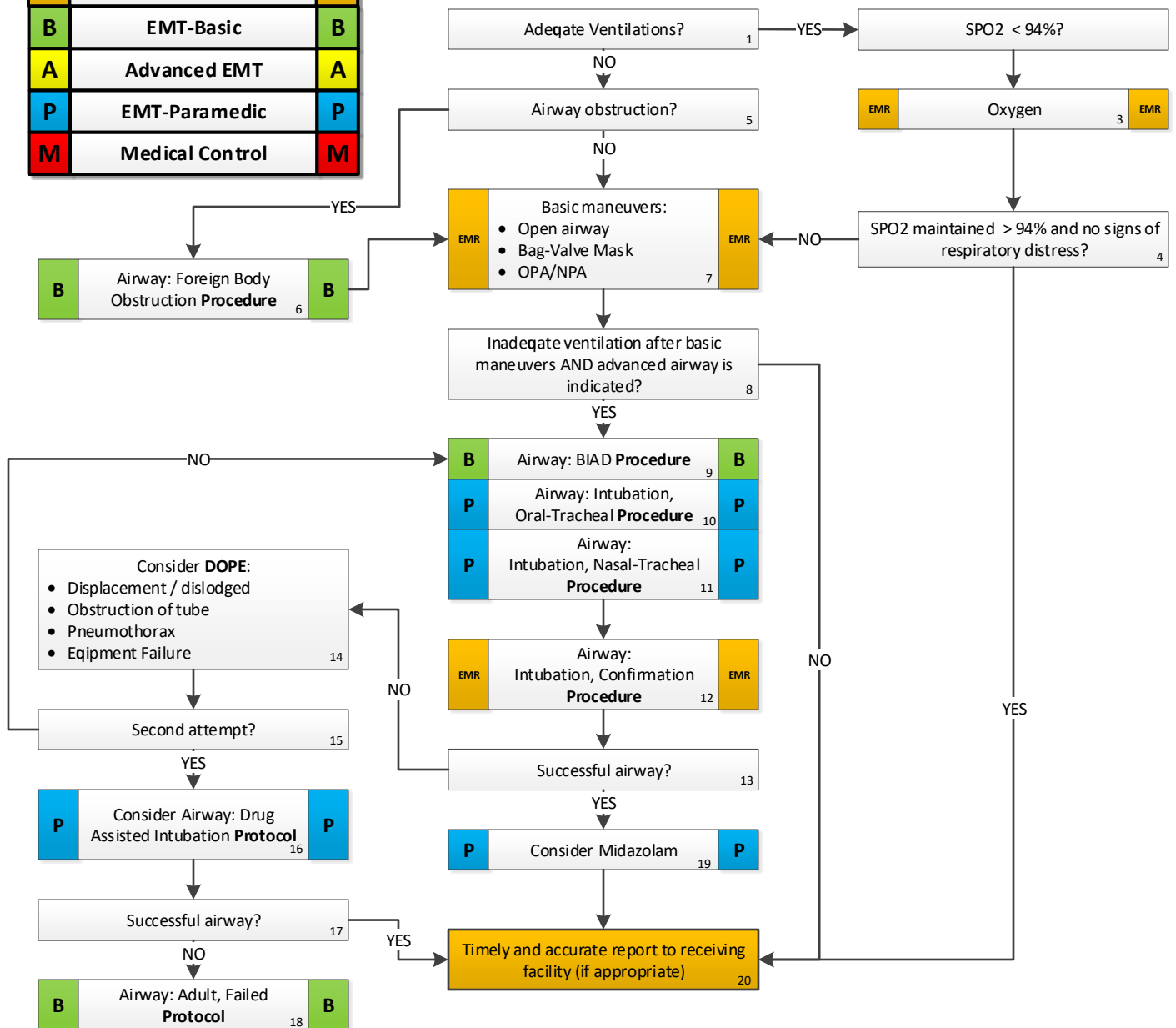


Pearls:

- A witness of patient refusal of care signature must be obtained from a non-EMS individual, preferably a patient family member or an individual from another first response agency.
- Persons under the age of 18 are not permitted to refuse care for themselves unless documentation of legal emancipation can be provided.
- A parent, legal guardian, or documented legal power of attorney may choose to refuse care and sign for a patient.
- A life threatening condition is defined as:
 - Heart Rate > 120
 - Respiratory Rate > 30 or < 10
 - Systolic Blood Pressure < 90
 - Altered Level of Consciousness

Airway: Adult

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B	EMT-Basic	B
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P	EMT-Paramedic	P
M	Medical Control	M

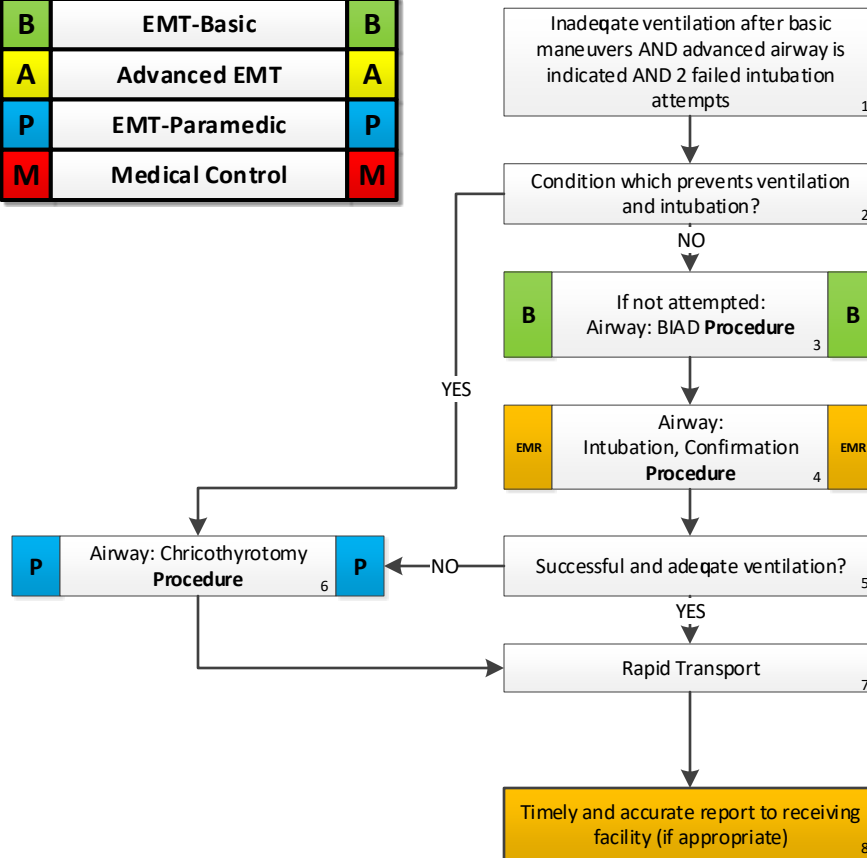


Pearls:

- Adequate ventilation would include an open airway, effortless air movement, and signs of normal perfusion.
- In the setting of a traumatic head injury strict avoidance of hypoxia and hypocarbia must be observed.
- If first intubation attempt fails, consider an adjustment and then try again:
 - Different laryngoscope blade
 - Different ETT size
 - Change head positioning
- Capnography is mandatory with all methods of airway control. Document results.
- In a sedated patient or one who is suspected of suffering from an overdose an absolute end-tidal CO₂ value of 50 mm Hg or an increase of >10 mm Hg over baseline may indicate respiratory inadequacy.
- For the purposes of this protocol a secure airway is when the patient is receiving appropriate oxygenation and ventilation.
- An Intubation Attempt is defined as passing the laryngoscope blade or endotracheal tube past the teeth or inserted into the nasal passage.
- Ventilatory rate should maintain a EtCO₂ of 35-45. Avoid hyperventilation.
- Paramedics should consider using a BIAD if oral-tracheal intubation is unsuccessful.
- Maintain C-spine immobilization for patients with suspected spinal injury.
- Sellick's and/or 'BURP' maneuver should not be used to assist with difficult intubations.
- It is important to secure the endotracheal tube well and consider c-collar to better maintain ETT placement.
- Advanced airways should be avoided in patients who have a gag reflex.

Airway: Adult, Failed

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P
M	Medical Control	M

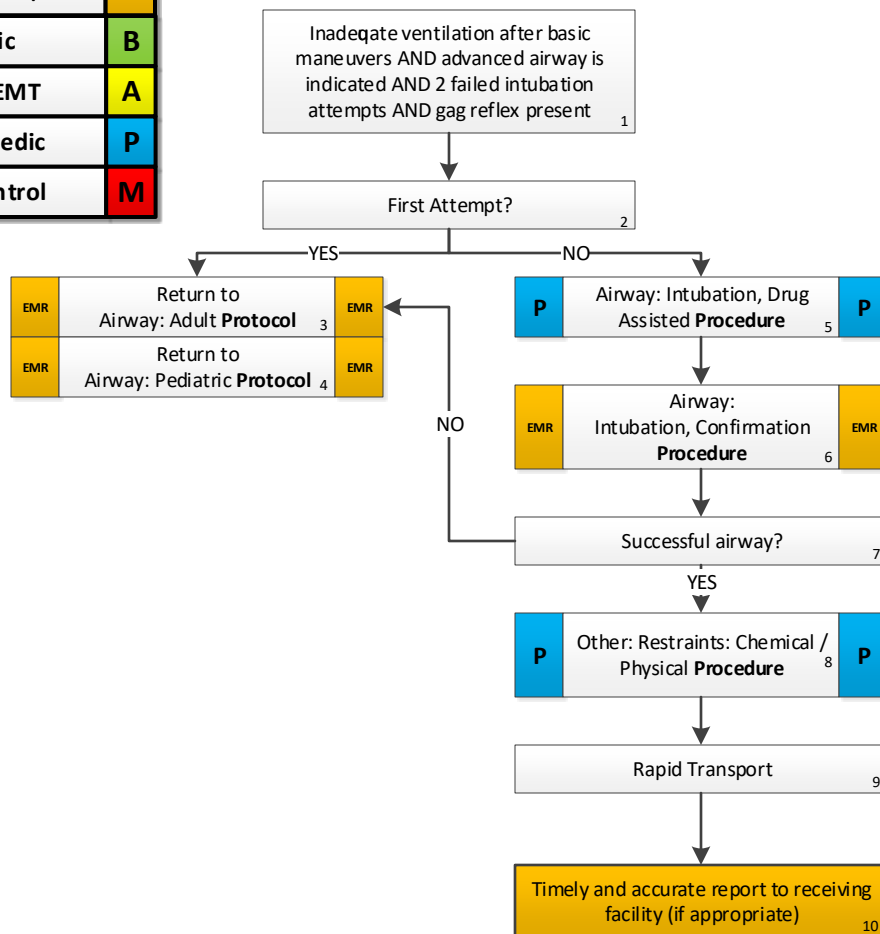


Pearls:

- Adequate ventilation would include an open airway, effortless air movement, and signs of normal perfusion.
- In the setting of a traumatic head injury strict avoidance of hypoxia and hypocarbia must be observed.
- If first intubation attempt fails, consider an adjustment and then try again:
 - Different laryngoscope blade
 - Different ETT size
 - Change head positioning
- Ventilation rate should be the normal adult rate of 12 per minute.
- Maintain a EtCO₂ between 30 and 35 and avoid hyperventilation.
- Capnography is mandatory with all methods of intubation. Document results.
- Notify Medical Control AS EARLY AS POSSIBLE about the patient's difficult / failed airway.

Airway: Drug Assisted Intubation

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P
M	Medical Control	M

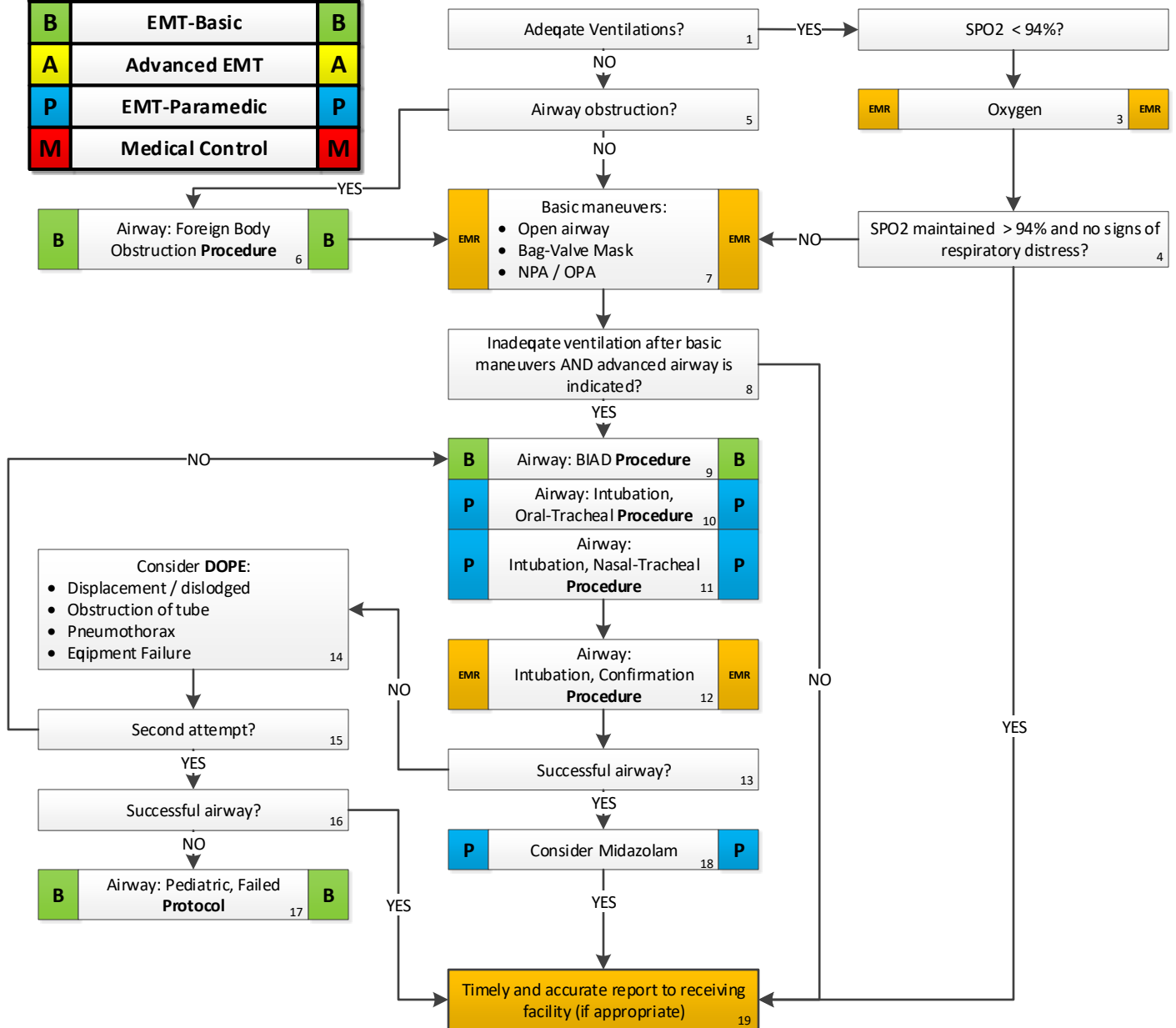


Pearls:

- **This protocol is for use in ADULT patients only.**
- Continuous Waveform Capnography and Pulse Oximetry are required for intubation verification and ongoing patient monitoring.
- If first intubation attempt fails, consider an adjustment and try again:
 - Different laryngoscope blade
 - Change head positioning
 - Different ETT size
 - Continuous pulse oximetry should be utilized in all patients.
- All equipment must be in place and ready for use prior to administering any drugs.
- Protect the patient from self extubation when the drugs wear off.

Airway: Pediatric

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P
M	Medical Control	M

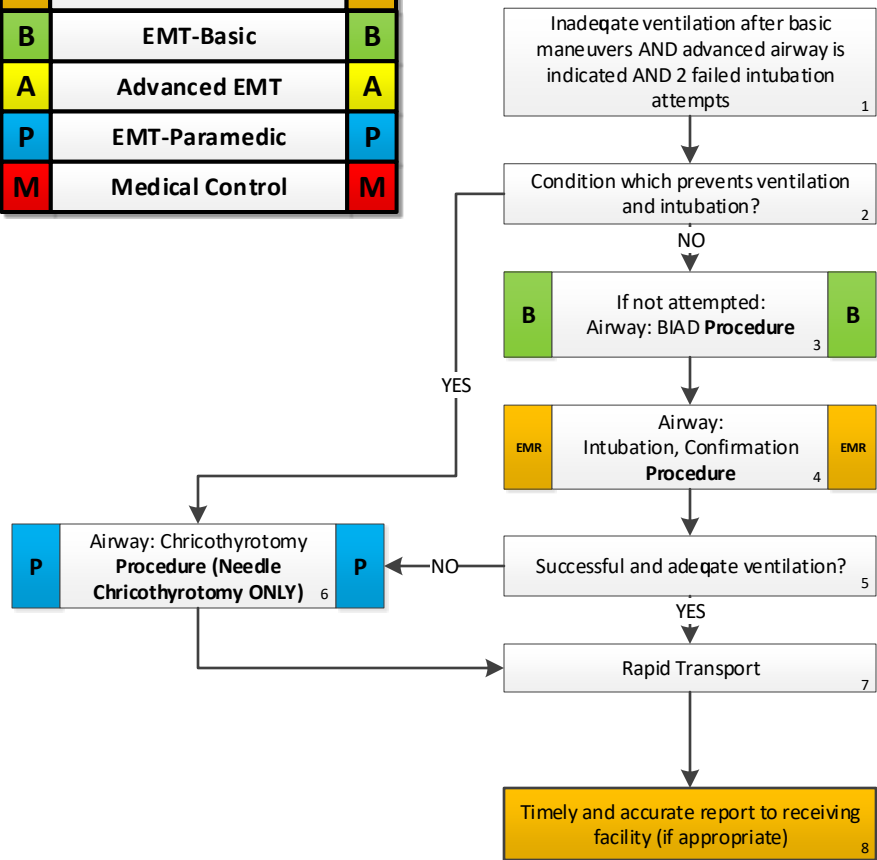


Pearls:

- Adequate ventilation would include an open airway, effortless air movement, and signs of normal perfusion.
- In the setting of a traumatic head injury strict avoidance of hypoxia and hypocarbia must be observed.
- If first intubation attempt fails, consider an adjustment and then try again:
 - Different laryngoscope blade
 - Different ETT size
 - Change head positioning
- Capnography is mandatory with all methods of airway control. Document results.
- In a sedated patient or one who is suspected of suffering from an overdose an absolute end-tidal CO₂ value of 50 mm Hg or an increase of >10 mm Hg over baseline may indicate respiratory inadequacy.
- For the purposes of this protocol a secure airway is when the patient is receiving appropriate oxygenation and ventilation.
- An Intubation Attempt is defined as passing the laryngoscope blade or endotracheal tube past the teeth or inserted into the nasal passage.
- Ventilatory rate should maintain a EtCO₂ of 35-45. Avoid hyperventilation.
- Paramedics should consider using a BIAD if oral-tracheal intubation is unsuccessful.
- Maintain C-spine immobilization for patients with suspected spinal injury.
- Sellick's and/or 'BURP' maneuver should not be used to assist with difficult intubations.
- It is important to secure the endotracheal tube well and consider c-collar to better maintain ETT placement.
- Advanced airways should be avoided in patients who have a gag reflex.

Airway: Pediatric, Failed

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P
M	Medical Control	M



Pearls:

- Adequate ventilation would include an open airway, effortless air movement, and signs of normal perfusion.
- In the setting of a traumatic head injury strict avoidance of hypoxia and hypocarbia must be observed.
- If first intubation attempt fails, consider an adjustment and then try again:
 - Different laryngoscope blade
 - Different ETT size
 - Change head positioning
- Maintain a EtCO₂ between 30 and 35 and avoid hyperventilation.
- Capnography is mandatory with all methods of intubation. Document results.
- Notify Medical Control AS EARLY AS POSSIBLE about the patient's difficult / failed airway.

Respiratory Distress

History:

- Asthma
- COPD
- Chronic bronchitis
- Emphysema
- Congestive heart failure
- Home treatment (oxygen, nebulizer)
- Medications (theophylline, steroids, inhalers)
- Toxic exposure, smoke inhalation

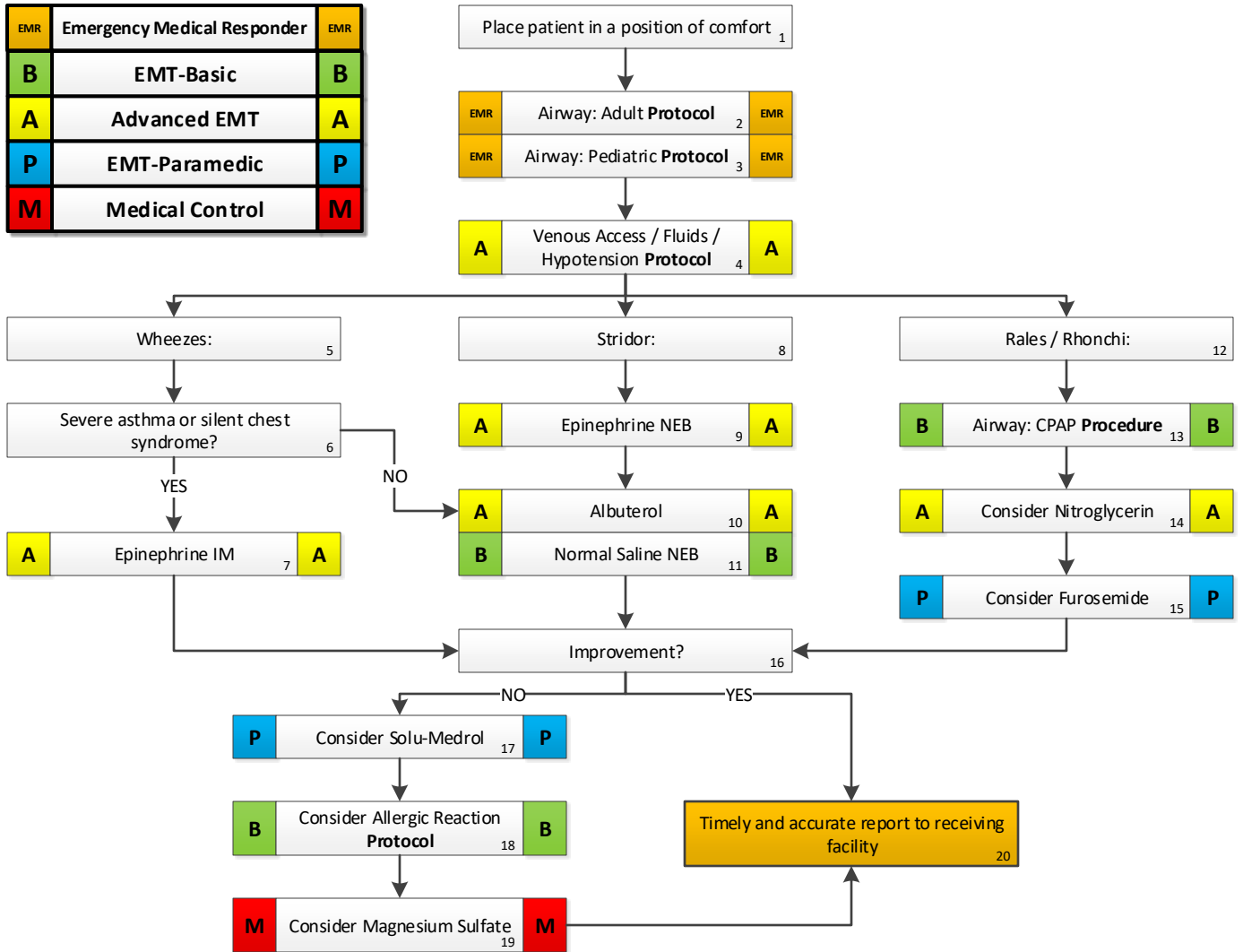
Signs & Symptoms:

- Shortness of breath
- Pursed lip breathing
- Decreased ability to speak
- Increased respiratory rate and effort
- Wheezing, rhonchi
- Use of accessory muscles
- Fever, cough
- Tachycardia

Differential:

- Asthma
- Anaphylaxis
- Aspiration
- COPD (Emphysema, Bronchitis)
- Pleural effusion
- Pneumonia
- Pulmonary embolus
- Pneumothorax
- Cardiac (MI or CHF)
- Pericardial tamponade
- Hyperventilation
- Inhaled toxin (Carbon monoxide, etc.)

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P
M	Medical Control	M



Pulmonary Protocols

Pearls:

- **Recommended Exam: Mental Status, HEENT, Skin, Neck, Heart, Lungs, Abdomen, Extremities, Neuro.**
- Steroids like Solu-Medrol have not been shown to improve outcomes when administered pre hospital and may be harmful. Carefully consider their administration and do not give them routinely or without specific cause.
- Avoid Nitroglycerin in any patient who has used Viagra or Levitra in the past 24 hours or Cialis in the past 36 hours due to potential severe hypotension.
- Furosemide and Narcotics have NOT been shown to improve the outcomes of EMS patients with pulmonary edema. Even though this historically has been a mainstay of EMS treatment, it is no longer recommended.
- Consider myocardial infarction in all these patients. Diabetics and geriatric patients often have atypical pain, or only generalized complaints.
- Carefully monitor the level of consciousness, BP, and respiratory status with the above interventions. (Epinephrine may precipitate cardiac ischemia. These patients should receive a 12 lead ECG.)
 - > 50 years of age - Use caution when administering epinephrine in older patients: USE HALF OF NORMAL DOSE
 - Have a history of cardiac disease
 - Heart rate is > 150
- Nebulized epinephrine for refractory stridor with prolonged transport time may consist of 1 mg of 1 mg/cc epinephrine diluted in 2 cc Normal Saline.
- A silent chest in respiratory distress is a pre-respiratory arrest sign.

Allergic Reaction

History:

- Onset and location
- Insect sting or bite
- Food allergy / exposure
- Medication allergy / exposure
- New clothing, soap, detergent
- Past history of reactions
- Past medical history
- Medication history

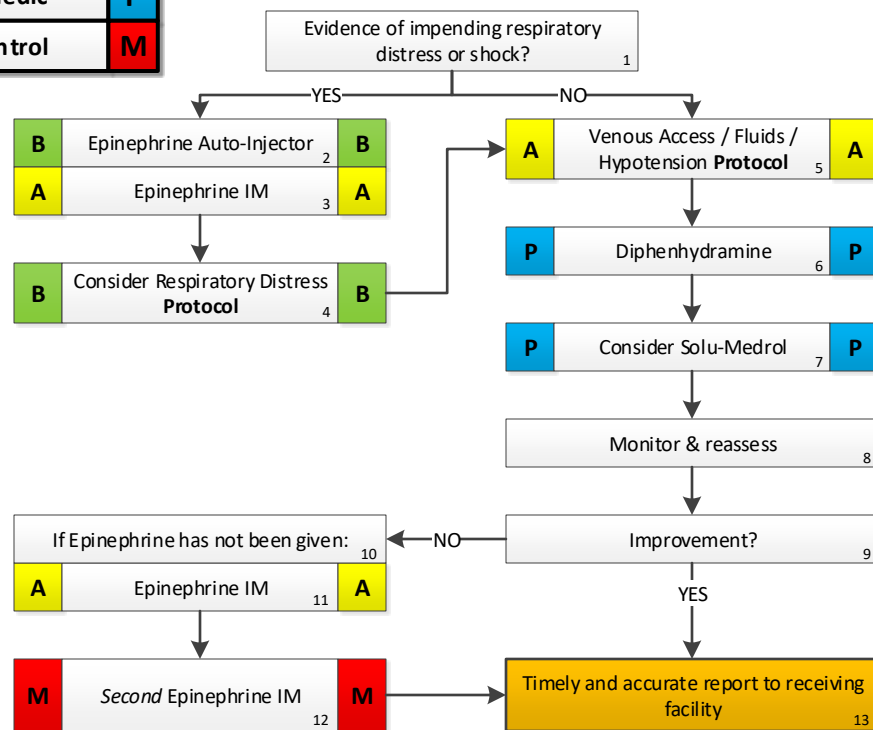
Signs & Symptoms:

- Itching or urticaria
- Coughing / wheezing or respiratory distress
- Chest or throat constriction
- Difficulty swallowing
- Hypotension or shock
- Edema

Differential:

- Urticaria (rash only)
- Anaphylaxis (systemic effect)
- Shock (vascular effect)
- Angioedema (drug induced)
- Aspiration / Airway obstruction
- Vasovagal event
- Asthma or COPD
- CHF

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
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M	Medical Control	M



Pearls:

- **Recommended Exam: Mental Status, Skin, Heart, Lungs.**
- **Use caution when administering epinephrine in patients: USE HALF OF NORMAL DOSE**
(Epinephrine may precipitate cardiac ischemia. These patients should receive a 12lead ECG.)
 - > 50 years of age
 - Have a history of cardiac disease
 - Heart rate is > 150
- Any patient with respiratory symptoms or extensive reaction should receive IV or IM diphenhydramine.
- The shorter the onset from symptoms to contact, the more severe the reaction.

Chest Pain and STEMI

History:

- Age
- Medications: (Viagra, Levitra, Cialis)
- Past medical history (MI, Angina, Diabetes, post-menopausal)
- Allergies (Aspirin, Morphine, Amiodarone)
- Recent physical exertion
- Palliation / Provocation
- Quality (crampy, constant, sharp, dull, etc.)
- Region / Radiation / Referred
- Severity (1-10)
- Time (onset / duration / repetition)

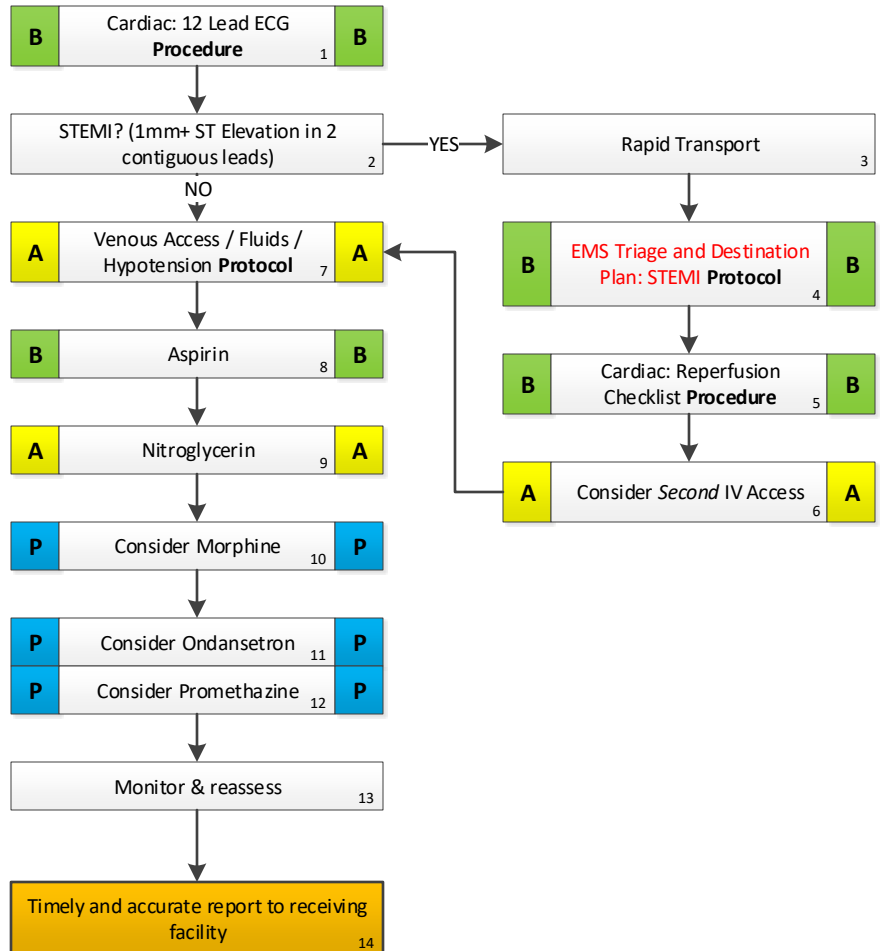
Signs & Symptoms:

- CP (pain, pressure, aching, vice-like tightness)
- Location (substernal, epigastric, arm, jaw, neck, shoulder)
- Radiation of pain
- Pale, diaphoresis
- Shortness of breath
- Nausea, vomiting, dizziness
- **Time of Onset**

Differential:

- Trauma vs. Medical
- Angina vs. Myocardial infarction
- Pericarditis
- Pulmonary embolism
- Asthma / COPD
- Pneumothorax
- Aortic dissection or aneurysm
- GE reflux or Hiatal hernia
- Esophageal spasm
- Chest wall injury or pain
- Pleural pain
- Overdose (Cocaine) or Methamphetamine

EMR	Emergency Medical Responder	EMR
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M	Medical Control	M



Pearls:

- **Recommended Exam: Mental Status, Skin, Neck, Lung, Heart, Abdomen, Back, Extremities, Neuro**
- Avoid Nitroglycerin in any patient who has used Viagra or Levitra in the past 24 hours or Cialis in the past 36 hours due to potential severe hypotension.
- Patients with STEMI (ST-Elevation Myocardial Infarction) should be transported to the appropriate destination based on the EMS System STEMI Plan
- If patient has taken nitroglycerin without relief, consider potency of the medication.
- Nitroglycerin and Narcotics (Morphine) may be repeated per dosing guidelines in Drug List.
- Diabetics and geriatric patients often have atypical pain, or only generalized complaints.
- **Exceptions to a Scene Time greater than 10 minutes measured from "patient contact" to "left scene" must be explained in EPCR narrative.**

Hypertension

History:

- Documented hypertension
- Related diseases: diabetes, CVA renal failure, cardiac
- Medications (compliance ?)
- Erectile dysfunction medication
- Pregnancy

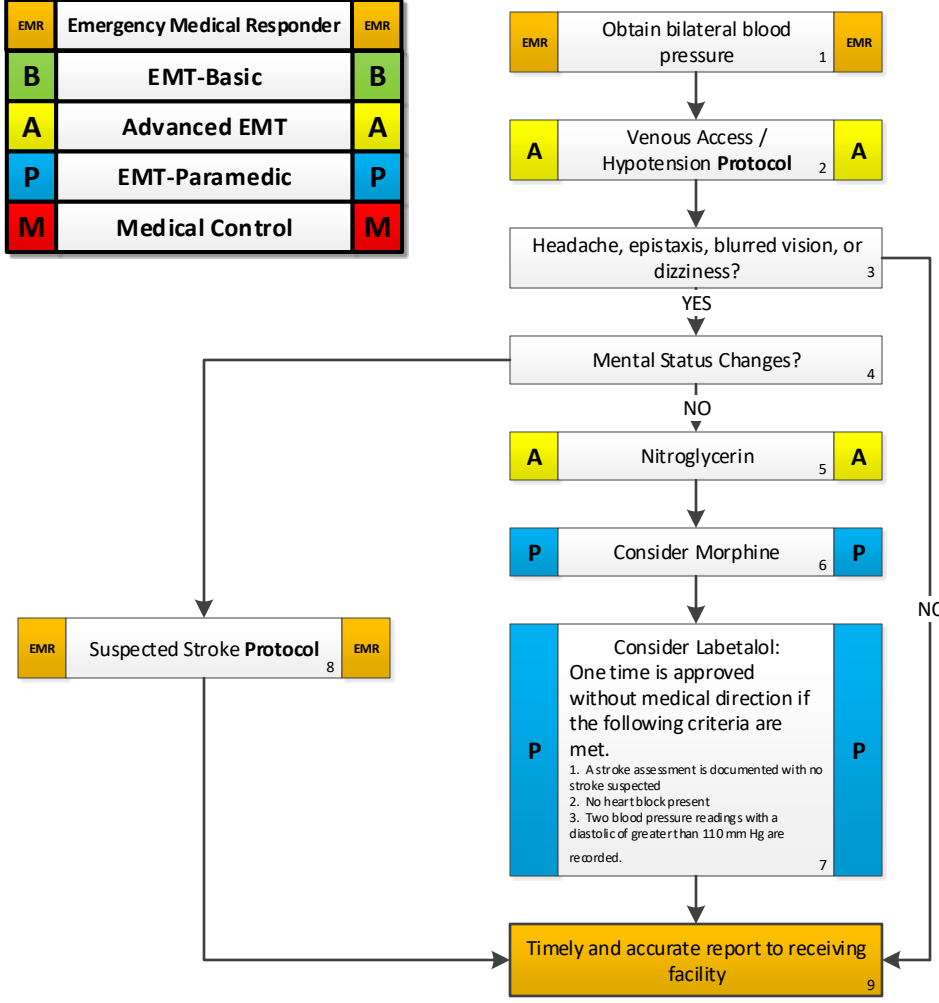
Signs & Symptoms:

- One of these:
 - Systolic BP > 180
 - Diastolic BP > 100
- AND at least one of these:
 - Headache
 - Epistaxis
 - Blurred vision
 - Dizziness

Differential:

- Hypertensive encephalopathy
- Primary CNS Injury
 - Cushing's response = bradycardia with hypertension
- Myocardial infarction
- Aortic dissection (aneurysm)
- Pre-eclampsia / Eclampsia

EMR	Emergency Medical Responder	EMR
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A	Advanced EMT	A
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M	Medical Control	M



Pearls:

- **Recommended Exam: Mental Status, Skin, Neck, Lung, Heart, Abdomen, Back, Extremities, Neuro-**
- Avoid Nitroglycerin in any patient who has used Viagra or Levitra in the past 24 hours or Cialis in the past 36 hours due to potential severe hypotension.
- Never treat elevated blood pressure based on one set of vital signs.
- Nitroglycerin may be given to lower blood pressure in patients who have an elevated diastolic BP of > 100 or a systolic blood pressure > 180 and are symptomatic with chest pain, respiratory distress, syncope, headache or mental status changes.
- Symptomatic hypertension is typically revealed through end organ damage to the cardiac, CNS or renal systems.
- All symptomatic patients with hypertension should be transported with their head elevated.
- **In the setting of an acute mental status change or focal neurologic deficit consistent with a stroke, aggressive reduction in blood pressure is not indicated and may worsen outcome. Contact Medical Control**

Bradycardia

History:

- Bradycardia
- Medications
- Beta-Blockers
- Calcium channel blockers
- Clonidine
- Digoxin
- Pacemaker

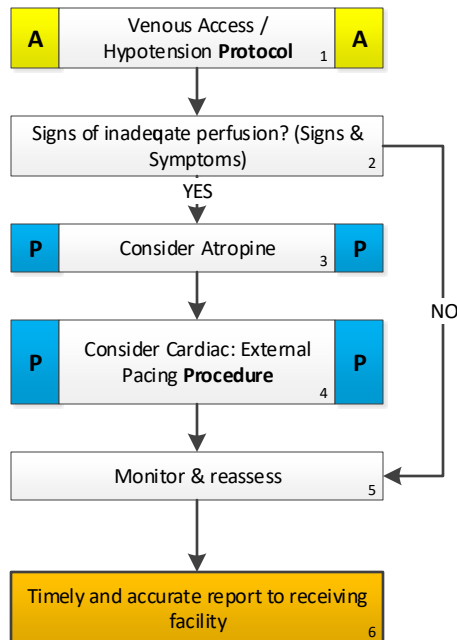
Signs & Symptoms:

- HR < 60/min with:
 - Hypotension
 - Acute altered mental status
 - Chest pain
 - Acute CHF
 - Seizures
 - Syncope
 - Shock
 - Respiratory distress
 - Syncope

Differential:

- Acute myocardial infarction
- Hypoxia
- Pacemaker failure
- Hypothermia
- Sinus bradycardia
- Athletes
- Head injury (elevated ICP) or
- Stroke
- Spinal cord lesion
- Sick sinus syndrome
- AV blocks (1°, 2°, or 3°)
- Overdose

EMR	Emergency Medical Responder	EMR
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Pearls:

- **Recommended Exam: Mental Status, Neck, Heart, Lungs, Neuro.**
- **The use of Lidocaine, Beta Blockers, and Calcium Channel Blockers in heart block can worsen Bradycardia and lead to asystole and death**
- Treatment of Bradycardia is based upon the presence or absence of symptoms.
 - If symptomatic treat.
 - If symptomatic with chest pain, dizziness, cyanosis, altered mental status, etc. Consider cardiac external pacing as first treatment.
 - If asymptomatic, monitor only, be prepared for changes in patient presentation.
- In wide complex slow rhythm consider hyperkalemia
- Remember: The use of Atropine for PVCs in the presence of a MI may worsen heart damage.
- Consider treatable causes for Bradycardia (Beta Blocker OD, Calcium Channel Blocker OD, etc.)
- Ensure adequate oxygenation and a peripheral SPO₂ > 94%

SVT / Wide Complex Tachycardia

History:

- Medications:
 - Aminophylline
 - Diet pills
 - Thyroid supplements
 - Decongestants
 - Digoxin
- Diet (caffeine, chocolate)
- Drugs (nicotine, cocaine)
- History of palpitations / heart racing
- Syncope / near syncope
- CHF
- Pacemaker
- WPW

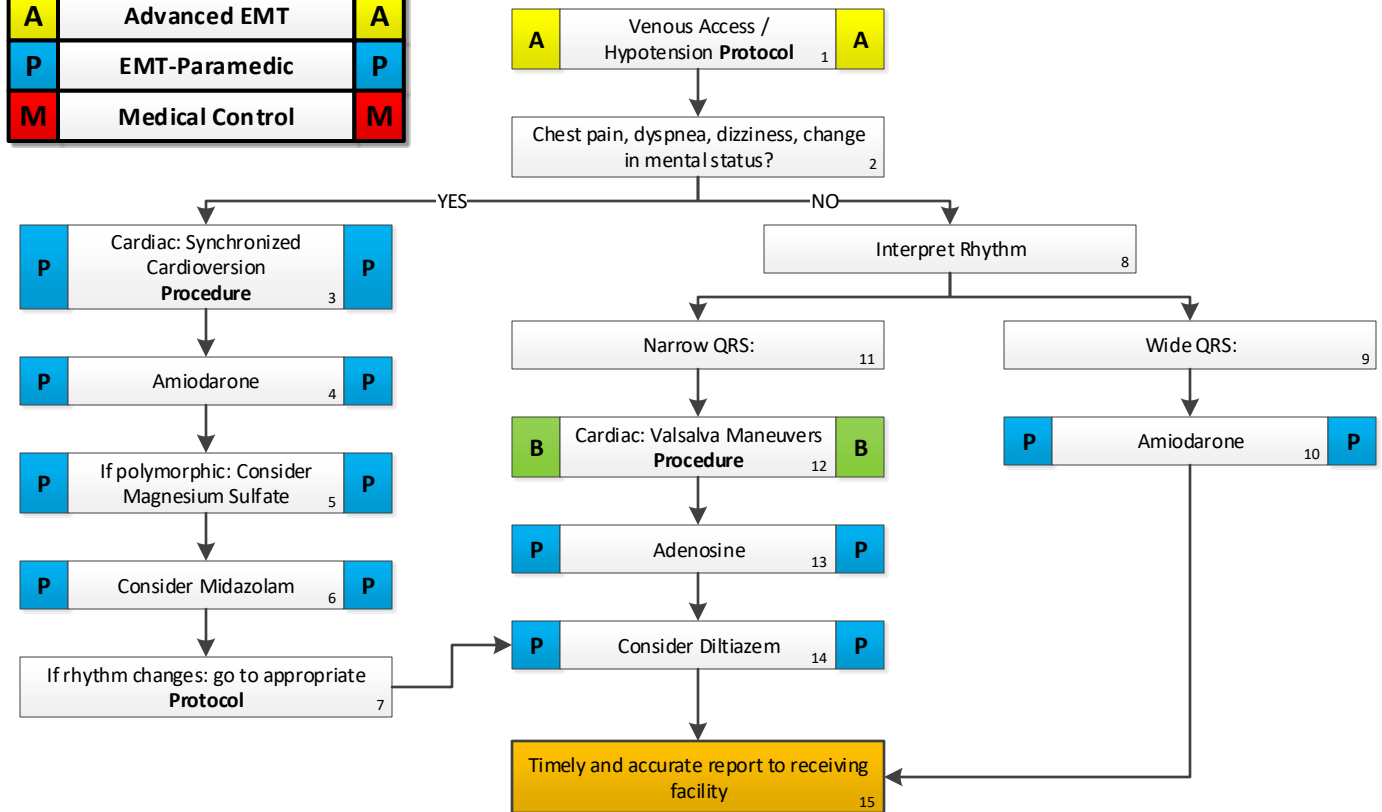
Signs & Symptoms:

- Ventricular tachycardia on ECG (Runs or sustained)
- Conscious, rapid pulse
- Chest pain
- Dyspnea
- Dizziness
- Change in mental status
- Rate usually 150 - 180 bpm for
- QRS > 0.12 Sec = Wide Complex
- QRS < 0.12 Sec = Narrow / SVT
- WPW history = Wide Complex

Differential:

- Heart disease (WPW, Valvular)
- Sick sinus syndrome
- Myocardial infarction
- Electrolyte imbalance
- Exertion, Pain, Emotional stress
- Fever
- Hypoxia
- Hypovolemia or Anemia
- Drug effect / Overdose (see HX)
- Hyperthyroidism
- Pulmonary embolus
- Artifact / Device failure

EMR	Emergency Medical Responder	EMR
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M	Medical Control	M



Pearls:

- **Recommended - Exam: Mental Status, Skin, Neck, Lung, Heart, Abdomen, Back, Extremities, Neuro**
- For witnessed / monitored ventricular tachycardia, try having patient cough.
- Polymorphic V-Tach (Torsades de Pointes) may benefit from the administration of magnesium sulfate.
- If presumed hyperkalemia (end-state renal disease, dialysis, etc.), administer Sodium Bicarbonate.
- **If patient has history or 12 Lead ECG reveals Wolfe Parkinson White (WPW), DO NOT administer a Calcium Channel Blocker (e.g., Diltiazem).**
- Adenosine is not harmful in Atrial flutter and may be useful to reveal the rhythm.
- Monitor for hypotension after administration of Calcium Channel Blocker or Beta Blockers.
- Monitor for respiratory depression and hypotension associated with Midazolam.
- Continuous pulse oximetry is required for all SVT Patients.
- Document all rhythm changes with monitor strips and obtain monitor strips with each therapeutic intervention.

Cardiac Arrest

History:

- Events leading to arrest
- Estimated downtime
- Past medical history
- Medications
- Existence of terminal illness
- Signs of lividity, rigor mortis
- DNR or Living Will

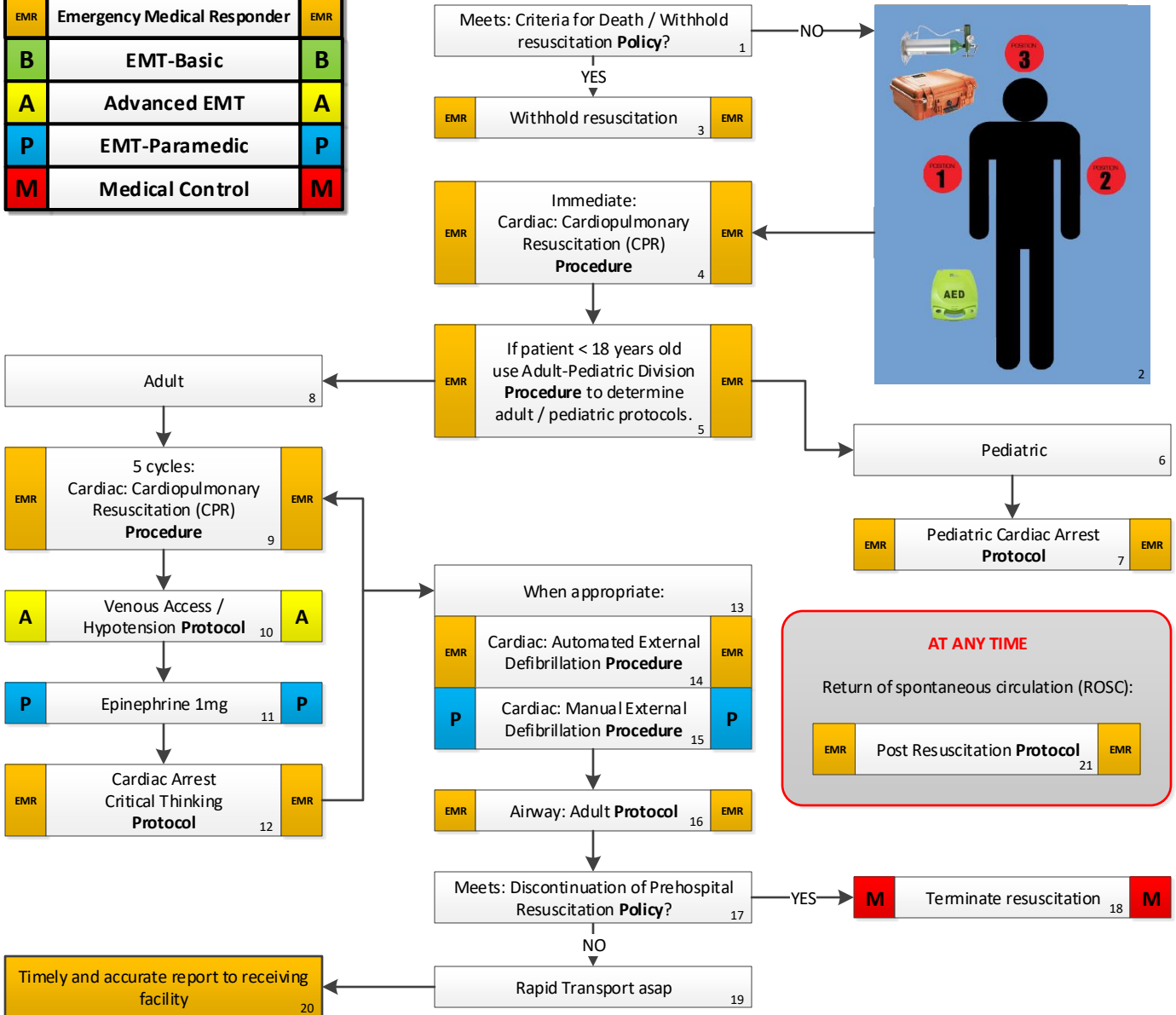
Signs & Symptoms:

- Unresponsive
- Apneic
- Perfusionless

Differential:

- Medical vs Trauma
- V. Fib. vs Perfusionless V. Tach.
- Asystole
- Perfusionless electrical activity (PEA)

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P
M	Medical Control	M



Pearls:

- **Recommended Exam: Mental Status.**
- Success is based on proper planning and execution.
- Procedures require space and patient access. Make room to work.
- Reassess airway frequently and with every patient move.
- Maternal Arrest - Treat mother per appropriate protocol with immediate notification to Medical Control and rapid transport.
- **Effective compressions & timely defibrillation are the keys to success.**
- **Monitor ETCO2, even with BVM, for a abrupt and sustained elevation as a sensitive indicator of a return of spontaneous circulation**

Cardiac Arrest Critical Thinking

History:

- Events leading to arrest
- Estimated downtime
- Past medical history
- Medications
- Existence of terminal illness
- Signs of lividity, rigor mortis
- DNR or Living Will

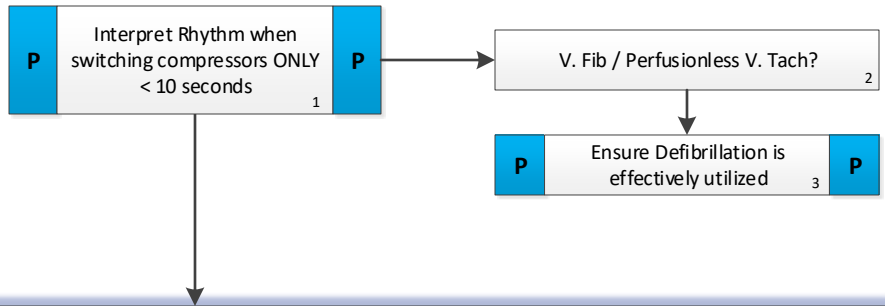
Signs & Symptoms:

- Unresponsive
- Apneic
- Perfusionless

Differential:

- Medical vs Trauma
- V. Fib. vs Perfusionless V. Tach.
- Asystole
- Perfusionless electrical activity (PEA)

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<p>Hypoxia: 4</p> <p>EMR Airway: Adult Protocol 5 EMR</p>	<p>Toxicity: 15</p> <p>P IV / IO Naloxone 16 P</p> <p>P Sodium bicarbonate 17 P</p>	<p>Polymorphic Wide QRS: 22</p> <p>P Magnesium Sulfate 23 P</p>
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<p>Hypoglycemia: 11</p> <p>A Dextrose 50% 12 A</p>	<p>AT ANY TIME</p> <p>Return of spontaneous circulation (ROSC):</p> <p>EMR Post Resuscitation Protocol 32 EMR</p>	<p>Wide QRS with rate > 150 29</p> <p>P Cardiac: Synchronized Cardioversion Procedure 30 P</p> <p>P Consider Magnesium Sulfate 31 P</p>
<p>Hypothermia: 13</p> <p>EMR Ensure warm environment 14 EMR</p>		

Cardiac Protocols

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- **Effective compressions & timely defibrillation are the keys to success.**
- **Monitor ETCO2, even with BVM, for a abrupt and sustained elevation as a sensitive indicator of a return of spontaneous circulation**
- H's & T's:

Hypovolemia	Hyper/Hypo-kalemia	Toxicity	Tension Pneumothorax
Hypoxia	Hypoglycemia	Tamponade	Trauma
Hydrogen-Ion (acidosis)	Hypothermia	Thrombosis (coronary, cranial, pulmonary)	

Post Resuscitation

History:

- Respiratory arrest
- Cardiac Arrest

Signs & Symptoms:

- Return of spontaneous circulation
- Significant and sustained rise in ETCO2

Differential:

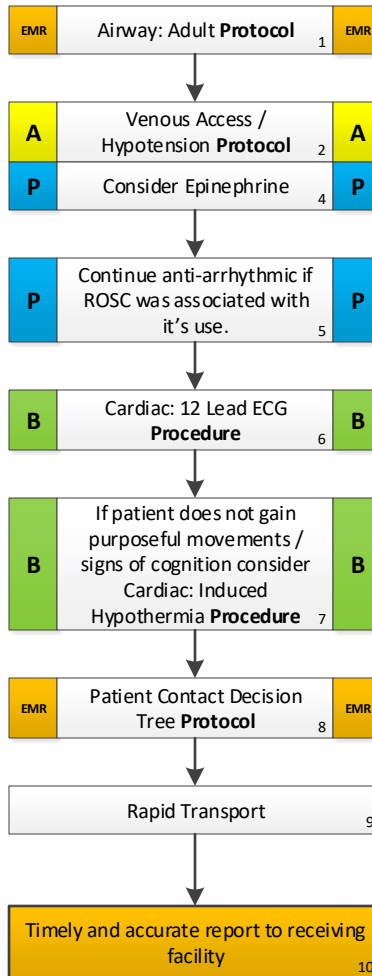
- Medical or Trauma
- Hypoxia
- Potassium (hypo / hyper)
- Drug overdose
- Acidosis
- Hypothermia
- Device (lead) error

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AT ANY TIME

Arrest reoccurs:

EMR	Cardiac Arrest Protocol	EMR
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Pearls:

- **Recommended Exam: Mental Status, Neck, Skin, Lungs, Heart, Abdomen, Extremities, Neuro.**
- Hyperventilation is a significant cause of hypotension and recurrence of cardiac arrest in the post resuscitation phase and must be avoided at all costs.
- Most patients immediately post resuscitation will require ventilation assistance.
- The condition of post-resuscitation patients fluctuates rapidly and continuously, and they require close monitoring.
- Appropriate post-resuscitation management may best be planned in consultation with medical control.
- Common causes of post-resuscitation hypotension include hyperventilation, hypovolemia, pneumothorax, and medication reaction to ALS drugs.
- Ensure adequate fluid resuscitation is ongoing. Utilize Epinephrine to maintain Mean Arterial Pressure (MAP) > 65.
 - $MAP = [systolic + (2 \times diastolic)] / 3$

Childbirth / Labor

History:

- Due date
- Time Time contractions started / how often
- Rupture of membranes
- Time / amount of any vaginal bleeding
- Sensation of fetal activity
- Past medical and delivery history
- Medications
- Gravida/Para Status
- High Risk pregnancy

Signs & Symptoms:

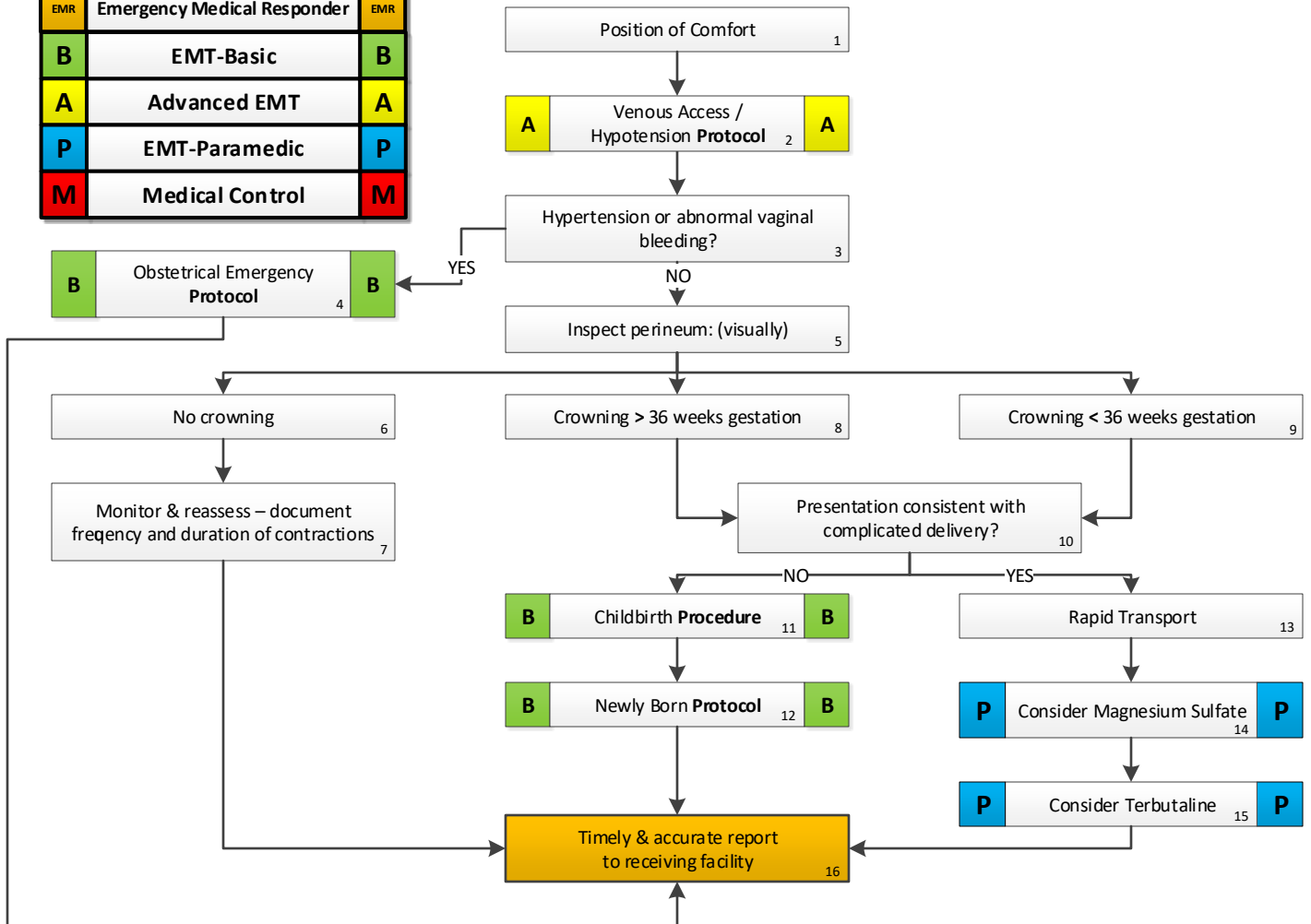
- Spasmodic pain
- Vaginal discharge or bleeding
- Crowning or urge to push
- Meconium

Differential:

- Due date
- Abnormal presentation
 - Buttock
 - Foot
 - Hand
- Prolapsed cord
- Placenta previa
- Abruptio placenta

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P
M	Medical Control	M

B	Obstetrical Emergency Protocol	B
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Pearls:

- **Recommended Exam (of Mother): Mental Status, Heart, Lungs, Abdomen, Neuro**
- Document all times (delivery, contraction frequency, and length).
- If maternal seizures occur, refer to the Obstetrical Emergencies Protocol.
- After delivery, massaging the uterus (lower abdomen) will promote uterine contraction and help to control post-partum bleeding.
- Some perineal bleeding is normal with any childbirth.
- Record APGAR at 1 minute and 5 minutes after birth.
- Complicated delivery includes:
 - Prolapsed Cord (apply gentle pressure to head to relieve pressure on cord).
 - Large quantities of blood or free bleeding.
 - Breach Birth (presentation of a limb before head).
 - Known or suspected placenta previa.

Newly Born

History:

- Due date and gestational age
- Multiple gestation (twins etc.)
- Meconium
- Delivery difficulties
- Congenital disease
- Medications (maternal)
- Maternal risk factors:
 - substance abuse
 - smoking

Signs & Symptoms:

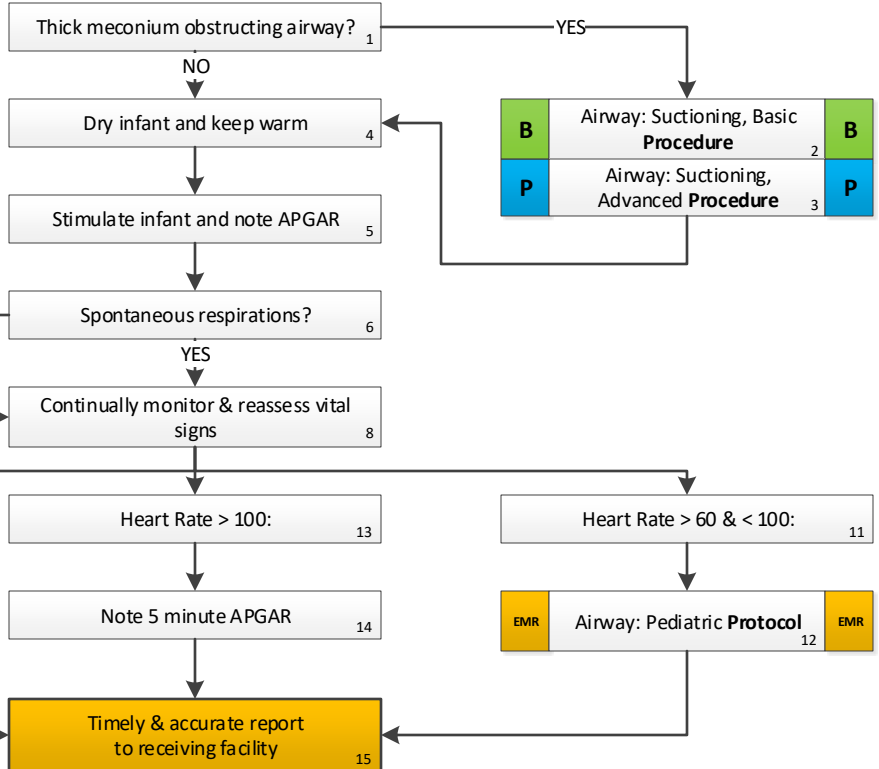
- Respiratory distress
- Peripheral cyanosis or mottling (normal)
- Central cyanosis (abnormal)
- Altered level of responsiveness
- Bradycardia

Differential:

- Airway failure:
 - Secretions
 - Respiratory drive
- Infection
- Maternal medication effect
- Hypovolemia
- Hypoglycemia
- Congenital heart disease
- Hypothermia

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EMR Bag- Valve Mask: 30 seconds at 40-60 breaths/min with room air 7 EMR



Pediatric & OB Protocols

Pearls:

- **Recommended Exam: Mental Status, Skin, HEENT, Neck, Chest, Heart, Abdomen, Extremities, Neuro.**
- CPR in infants is 120 compressions/minute with a 3:1 compression to ventilation ratio
- It is extremely important to keep infant warm.
- Maternal sedation or narcotics will sedate infant, (Naloxone effective) but may precipitate seizures.
- Consider hypoglycemia in infant.
- D10 = 1 cc of D50 per 4 cc of Normal Saline.
- Provide sufficient oxygen to maintain a saturation greater than 92% measured on the right upper extremity.
- **APGAR: (Document at 1 and 5 minutes in EPCR).**

Activity:

- 0 – Limp
- 1 – Some movement
- 2 – Active motion

Pulse:

- 0 – HR < 60
- 1 – HR < 100
- 2 – HR > 100

Grimace:

- 0 – No response
- 1 – Grimace with suction
- 2 – Reacts with suction

Appearance:

- 0 – Whole body pale
- 1 – Pale extremities
- 2 – Good color all over

Respiration:

- 0 – Apneic
- 1 – Weak cry; irr. Breathing
- 2 – Strong cry; normal breathing

Obstetrical Emergency

History:

- Past medical history
- Hypertension meds
- Prenatal care
- Prior pregnancies / births
- **Gravidity:**
 - Total number of pregnancies regardless of parity
- **Parity:**
 - Total number of live children delivered regardless of gravidity

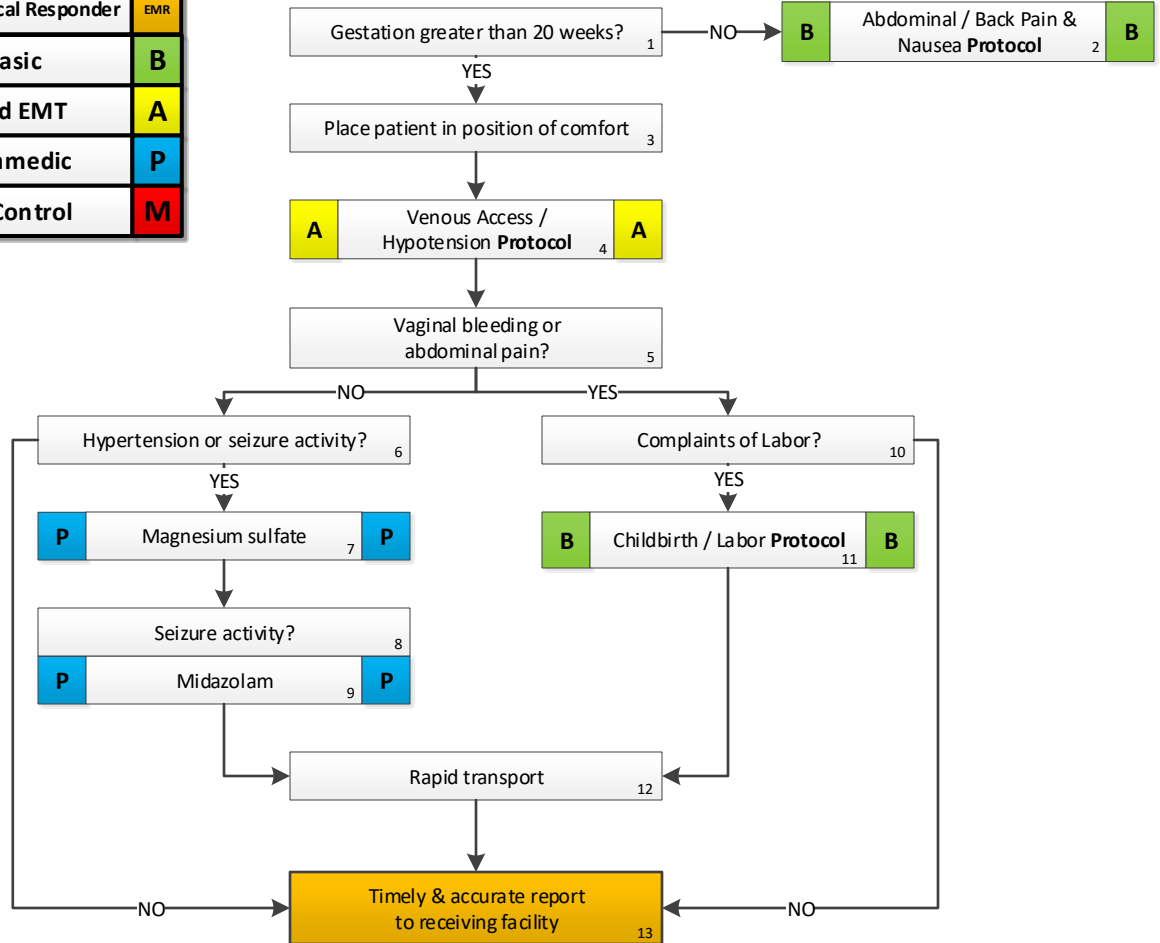
Signs & Symptoms:

- Vaginal bleeding
- Abdominal pain
- Seizures
- Hypertension
- Severe headache
- Visual changes
- Edema of hands and face

Differential:

- Pre-eclampsia / Eclampsia
- Placenta previa
- Placenta abruptio
- Spontaneous abortion

EMR	Emergency Medical Responder	EMR
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Pearls:

- **Severe headache, vision changes, or RUQ pain may indicate preeclampsia if over 20 weeks.**
- In the setting of pregnancy, hypertension is defined as a BP greater than 140 systolic **OR** greater than 90 diastolic, or a relative increase of 30 systolic and 20 diastolic from the patient's normal (pre-pregnancy) blood pressure.
- Place patient in a position of comfort. **Consider placing patient in left lateral position to minimize risk of supine hypotensive syndrome.**
- Ask patient to quantify bleeding. i.e. Number of pads used / hour.
- Any pregnant patient involved in a MVC should be seen immediately by a physician for evaluation and fetal monitoring.
- **Magnesium sulfate may cause hypotension and decreased respiratory drive. Use with caution.**
- This protocol is intended to be used for women who are greater than 20 weeks gestation. *By palpating the umbilicus with one finger, the uterus height should be above the umbilicus and finger.*

Pediatric Bradycardia

History:

- Past medical history
- Foreign body exposure
- Respiratory distress or arrest
- Apnea
- Possible toxic or poison exposure
- Congenital disease
- Medication (maternal or infant)

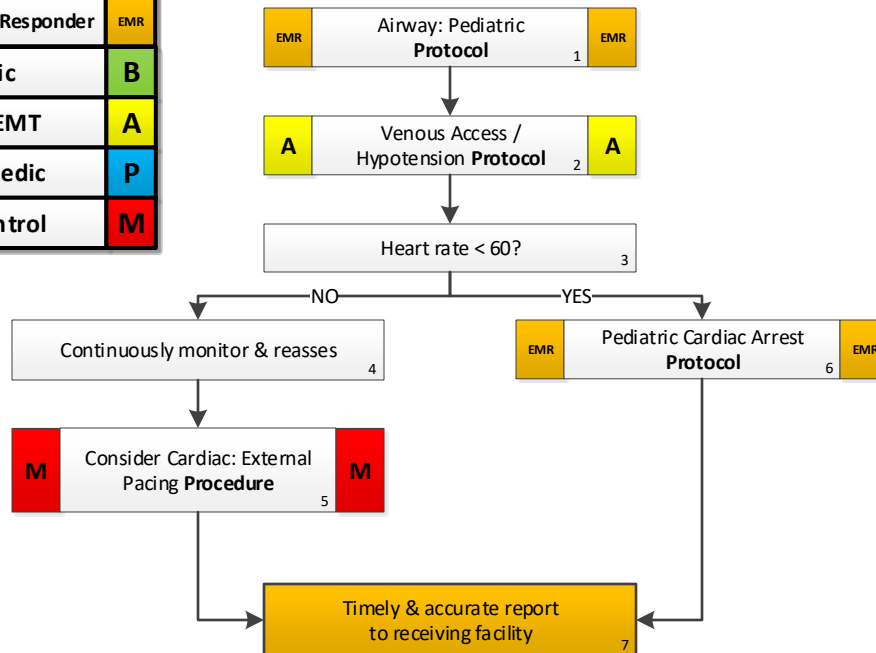
Signs & Symptoms:

- Decreased heart rate
- Delayed capillary refill or cyanosis
- Mottled, cool skin
- Hypotension or arrest
- Altered level of consciousness

Differential:

- Respiratory failure
- Foreign body
- Secretions
- Infection (croup, epiglottitis)
- Hypovolemia (dehydration)
- Congenital heart disease
- Trauma
- Tension pneumothorax
- Hypothermia
- Toxin or medication
- Hypoglycemia
- Acidosis

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Pearls:

- **Recommended Exam: Mental Status, HEENT, Skin, Heart, Lungs, Abdomen, Back, Extremities, Neuro.**
- Infant = < 1 year of age
- The majority of pediatric arrests are due to airway problems.
- Hypoglycemia, severe dehydration and narcotic effects may produce bradycardia.
- Consider treatable causes for Bradycardia (Beta Blocker OD, Calcium Channel Blocker OD, etc.)
- Ensure adequate oxygenation and a peripheral SPO2 > 92%

Pediatric Head Trauma

History:

- Time of injury
- Mechanism (blunt vs. penetrating)
- Loss of consciousness
- Bleeding
- Past medical history
- Medications
- Evidence for multi-trauma

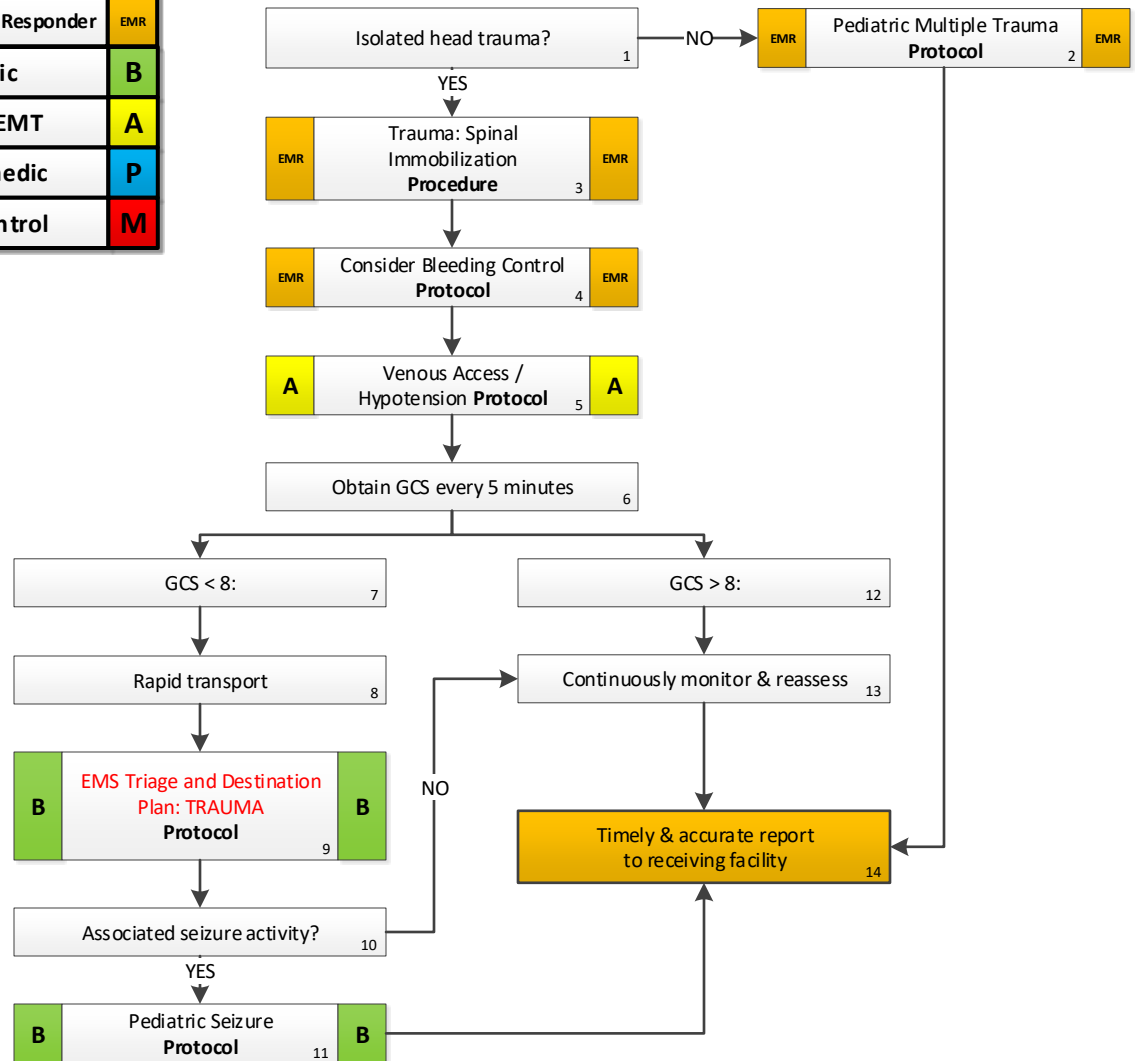
Signs & Symptoms:

- Pain, swelling, bleeding
- Altered mental status
- Unconscious
- Respiratory distress / failure
- Vomiting
- Major traumatic mechanism of injury
- Seizure

Differential:

- Skull fracture
- Brain injury (Concussion, Contusion, Hemorrhage or Laceration)
- Epidural hematoma
- Subdural hematoma
- Subarachnoid hemorrhage
- Spinal injury
- Abuse

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Pearls:

- **Recommended Exam: Mental Status, HEENT, Heart, Lungs, Abdomen, Extremities, Back, Neuro.**
- Consider hypoglycemia, dehydration, narcotics with altered mental status.
- Increased intracranial pressure (ICP) may cause hypertension and bradycardia (Cushing's Response).
- **Hypotension usually indicates injury or shock unrelated to the head injury.**
- The most important item to monitor and document is a change in the level of consciousness.
- Concussions are periods of confusion or LOC associated with trauma which may have resolved by the time EMS arrives. Any prolonged confusion or mental status abnormality which does not return to normal within 15 minutes or any documented loss of consciousness should be evaluated by a physician ASAP.

Pediatric Multiple Trauma

History:

- Time and mechanism of injury
- Height of any fall
- Damage to structure or vehicle
- Location in structure or vehicle
- Others injured or dead
- Speed and details of MVC
- Restraints / Protective equipment
- Carseat
- Helmet
- Pads
- Ejection
- Medications

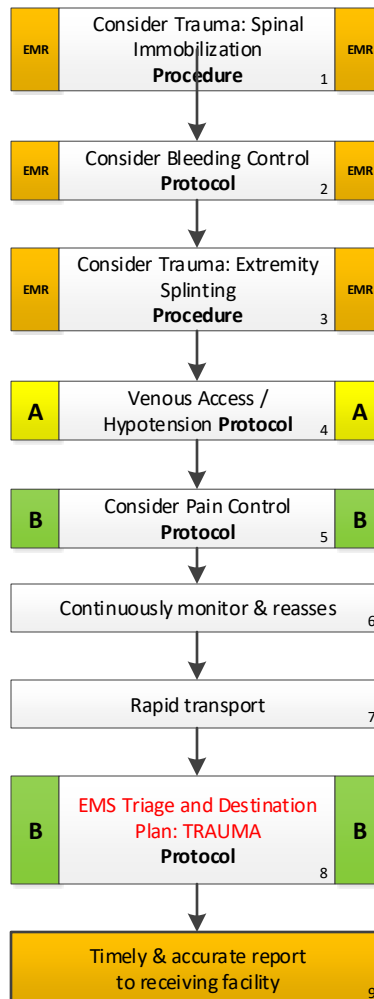
Signs & Symptoms:

- Pain
- Swelling
- Deformity
- Lesions
- Bleeding
- Altered mental status
- Unconscious
- Hypotension or shock
- Arrest

Differential:

- Chest Tension pneumothorax
 - Flail chest
 - Pericardial tamponade
 - Open chest wound
- Hemothorax
- Intra-abdominal bleeding
- Pelvis / Femur fracture
- Spine fracture / Cord injury
- Head injury (see Head Trauma)
- Extremity fracture / dislocation
- HEENT (Airway obstruction)
- Hypothermia

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Pearls:

- **Recommended Exam: Mental Status, Skin, HEENT, Heart, Lung, Abdomen, Extremities, Back, Neuro.**
- Mechanism is the most reliable indicator of serious injury. Examine all restraints / protective equipment for damage.
- In prolonged extrications or serious trauma consider air transportation for transport times and the ability to give blood.
- Do not overlook the possibility for child abuse.
- Scene times should not be delayed for procedures.
- Bag Valve Mask is an acceptable method of managing the airway if pulse oximetry can be maintained above 92%.

Pediatric Cardiac Arrest

History:

- Time of arrest
- Medical history
- Medications
- Possibility of foreign body
- Hypothermia

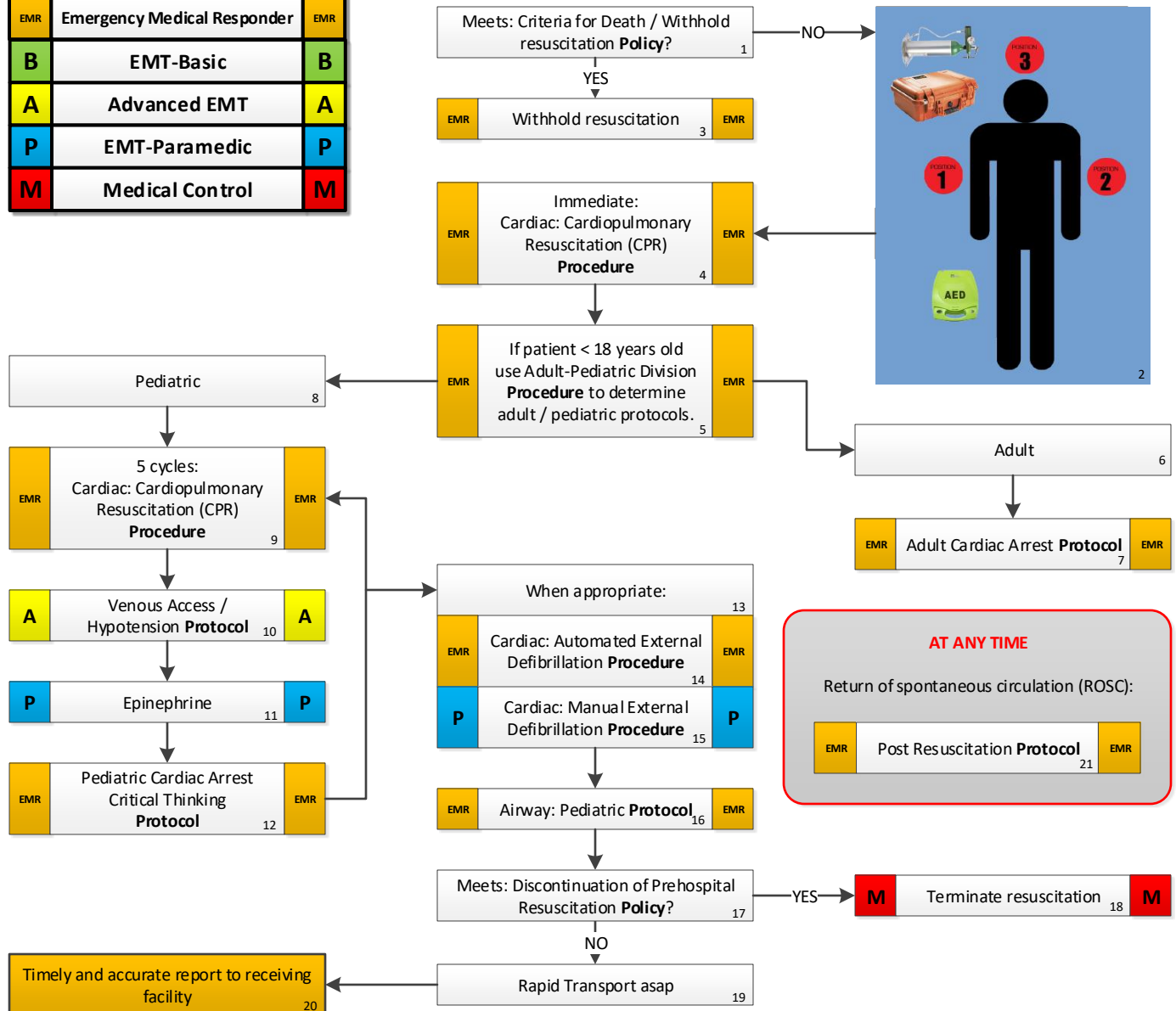
Signs & Symptoms:

- Unresponsive
- Apneic
- Perfusionless
- Heart Rate < 60

Differential:

- Respiratory failure
 - Foreign body, Secretions, Infection (croup, epiglottitis)
- Hypovolemia (dehydration)
- Congenital heart disease
- Trauma
- Tension pneumothorax, cardiac tamponade, pulmonary embolism
- Hypothermia
- Toxin or medication
- Electrolyte abnormalities (Glucose, K)
- Acidosis

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Pediatric PEA / Asystole

History:

- Events leading to arrest
- Estimated downtime
- Past medical history
- Medications
- Existence of terminal illness
- Signs of lividity, rigor mortis
- DNR or Living Will

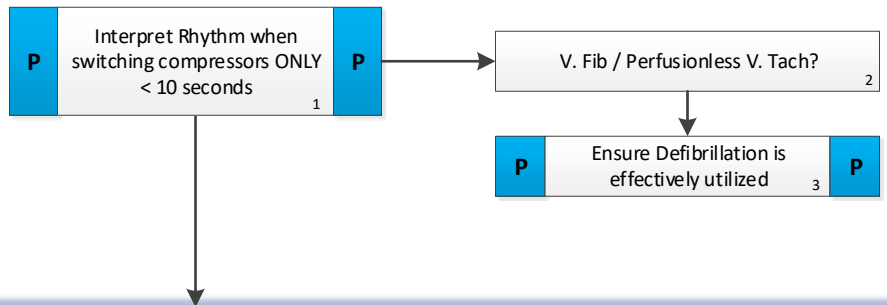
Signs & Symptoms:

- Unresponsive
- Apneic
- Perfusionless

Differential:

- Medical or Trauma
- Hypoxia
- Potassium (hypo / hyper)
- Drug overdose
- Acidosis
- Hypothermia
- Device (lead) error
- Death

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Pediatric & OB Protocols

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Hypovolemia
Hypoxia
Hydrogen-Ion (acidosis)

Hyper/Hypo-kalemia
Hypoglycemia
Hypothermia

Toxicity
Tamponade
Thrombosis (coronary, cranial, pulmonary)

Tension Pneumothorax
Trauma

Pediatric Respiratory Distress

History:

- Time of onset
- Possibility of foreign body
- Medical history
- Medications
- Fever or respiratory infection
- Other sick siblings
- History of trauma

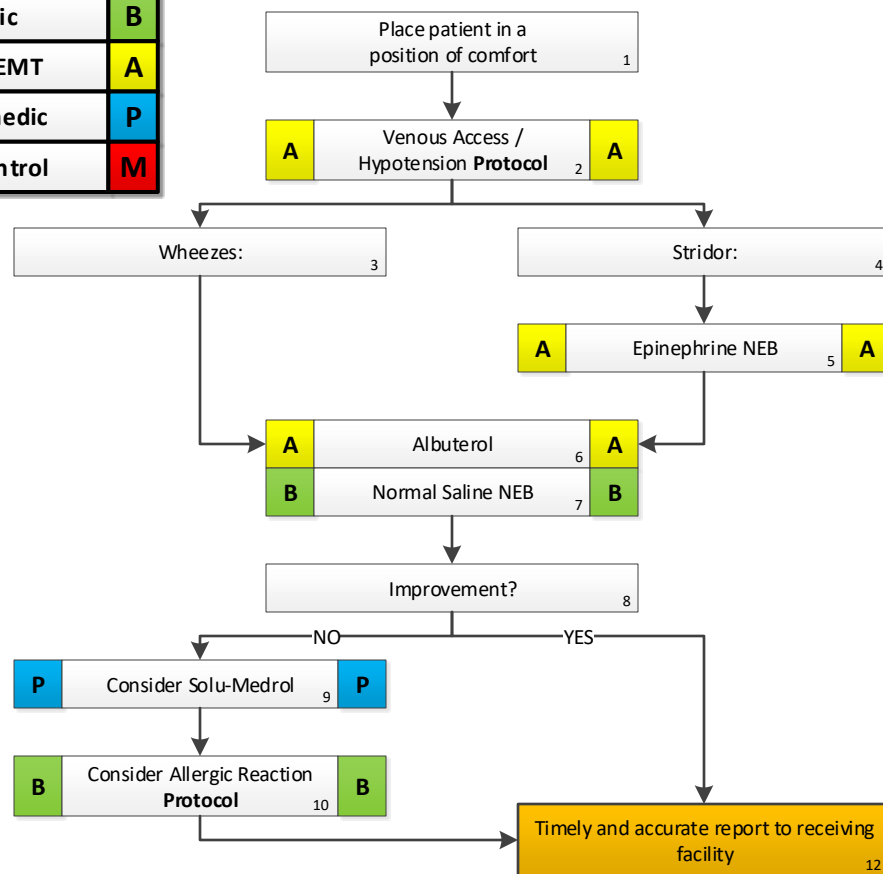
Signs & Symptoms:

- Wheezing
- or stridor
- Respiratory retractions
- Increased heart rate
- Altered level of consciousness
- Anxious appearance

Differential:

- Allergic Reaction
- Asthma
- Aspiration
- Foreign body
- Infection
 - Pneumonia
 - Croup
 - Epiglottitis
- Congenital heart disease
- Medication or Toxin
- Trauma

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Pearls:

- **Recommended Exam: Mental Status, HEENT, Skin, Neck, Heart, Lungs, Abdomen, Extremities, Neuro.**
- SPO2 should be monitored continuously if initial saturation is < 96%, or there is a decline in patient status despite normal SPO2 readings.
- Do not force a child into a position. They will protect their airway by their body position.
- Steroids have not been shown to improve outcome when administered in the pre-hospital period and should not be used routinely.
- **Bronchiolitis is a viral infection typically affecting infants which results in wheezing which may not respond to beta-agonists.**
- **Croup typically affects children < 2 years of age. It is viral, possible fever, gradual onset, no drooling is noted.**
- **Epiglottitis typically affects children > 2 years of age. It is bacterial, with fever, rapid onset, possible stridor, patient wants to sit up to keep airway open, drooling is common. Airway manipulation, IV initiation, or patient agitation may worsen the condition. Perform these interventions only if necessary to improve patient condition and never delay transport.**

Pediatric Seizure

History:

- Fever
- Prior history of seizures
- Seizure medications
- Reported seizure activity
- History of recent head trauma
- Congenital abnormality

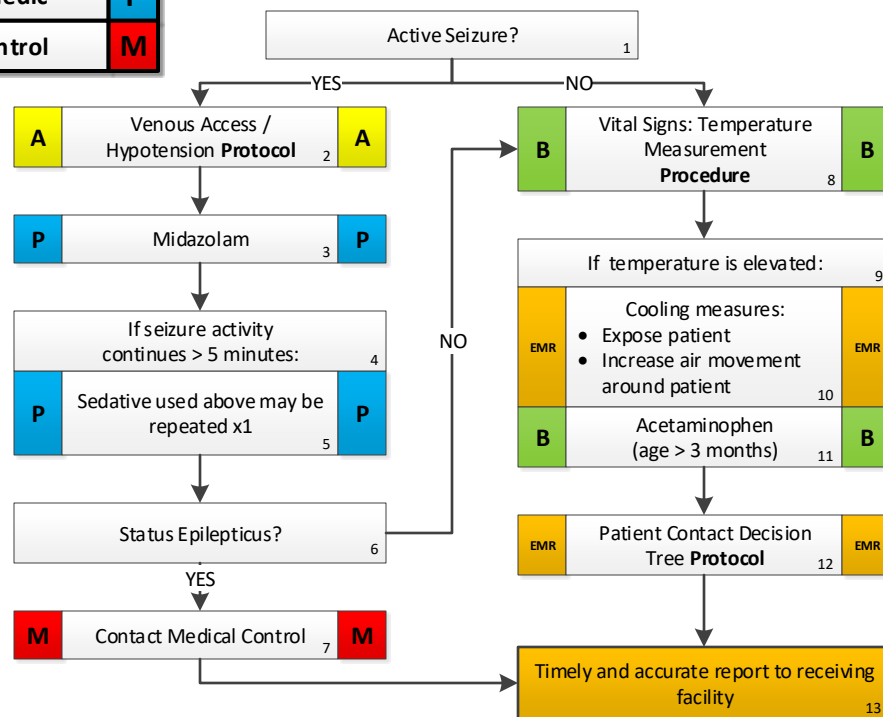
Signs & Symptoms:

- Observed seizure activity
- Altered mental status
- Hot, dry skin or elevated body temperature

Differential:

- Fever
- Infection
- Head trauma
- Medication or Toxin
- Hypoxia or Respiratory failure
- Hypoglycemia
- Metabolic abnormality / acidosis
- Tumor

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M	Medical Control	M



Pearls:

- **Recommended Exam: Mental Status, HEENT, Heart, Lungs, Extremities, Neuro.**
- **Repeat doses of benzodiazepines will NOT exceed MAX DOSE without Medical Control.**
- **Poly-pharmaceutical benzodiazepine administration Medical Control.**
- Addressing the ABCs and verifying blood glucose is more important than stopping the seizure.
- Avoiding hypoxemia is extremely important
- **Status Epilepticus is defined as two or more successive seizures without a period of consciousness or recovery. This is a true emergency requiring rapid airway control, treatment, and transport.**
- Grand mal seizures (generalized) are associated with loss of consciousness, possible incontinence, and tongue trauma.
- Focal seizures (petit mal) effect only a part of the body and do not usually result in a loss of consciousness.
- Jacksonian seizures are seizures which start as a focal seizure and become generalized.
- Be prepared to assist ventilations especially if a benzodiazepine is used; adhere to pediatric airway protocol.
- If evidence or suspicion of trauma, spine should be immobilized.
- In an infant, a seizure may be the only evidence of a closed head injury.

Pediatric Supraventricular Tachycardia

History:

- Past medical history
- Medications or Toxic Ingestion (Aminophylline, Diet pills, Thyroid supplements, Decongestants, Digoxin)
- Drugs (nicotine, cocaine)
- Congenital Heart Disease
- Respiratory Distress
- Syncope or Near Syncope

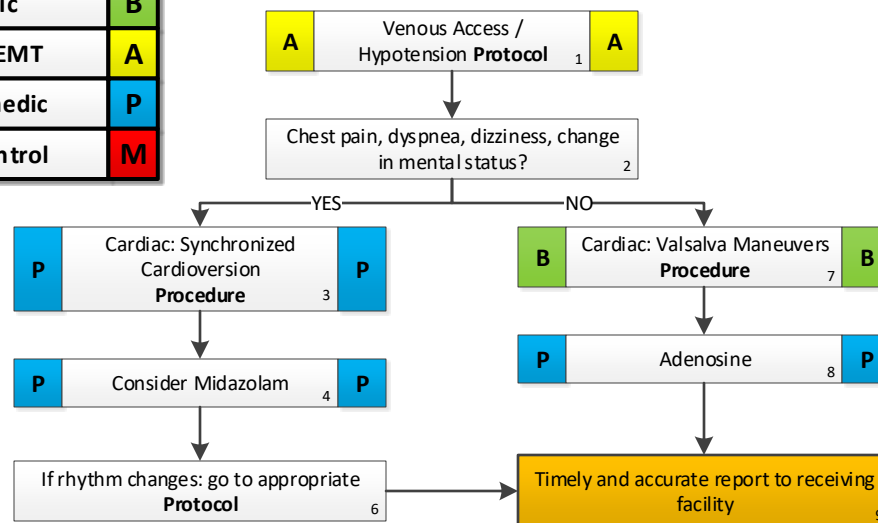
Signs & Symptoms:

- Heart Rate:
 - Child > 180
 - Infant > 220
- Pale or Cyanosis
- Diaphoresis
- Tachypnea
- Vomiting
- Hypotension
- Altered Level of Consciousness
- Pulmonary Congestion
- Syncope

Differential:

- Heart disease (Congenital)
- Hypo / Hyperthermia
- Hypovolemia or Anemia
- Electrolyte imbalance
- Anxiety / Pain / Emotional stress
- Fever / Infection / Sepsis
- Hypoxia
- Hypoglycemia
- Medication / Toxin / Drugs (see HX)
- Pulmonary embolus
- Trauma
- Tension Pneumothorax

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M	Medical Control	M



Pearls:

- **Recommended Exam: Mental Status, Skin, Neck, Lung, Heart, Abdomen, Back, Extremities, Neuro**
- Carefully evaluate the rhythm to distinguish Sinus Tachycardia, SVT, and Ventricular Tachycardia
- **Unstable:**
 - Altered mental status
 - Signs of poor perfusion
 - Hypotension
- Pediatric paddles should be used in children <10 kg.
- Monitor for respiratory depression and hypotension associated if Diazepam or Midazolam is used.
- Continuous pulse oximetry is required for all SVT patients if available.
- Document all rhythm changes with monitor strips and obtain monitor strips with each therapeutic intervention.
- **As a rule of thumb, the maximum sinus tachycardia rate is 220 – the patient's age in years.**
- If presumed hyperkalemia (end-state renal disease, dialysis, etc.), administer Sodium Bicarbonate.
- Monitor for respiratory depression and hypotension associated with Midazolam.
- Document all rhythm changes with monitor strips and obtain monitor strips with each therapeutic intervention.

Abdominal / Back Pain & Nausea

History:

- Age
- Time of last meal
- Last bowel movement/emesis
- Improvement or worsening with food or activity
- Duration of problem
- Past medical history
- Past surgical history
- Menstrual history (pregnancy)
- Travel history
- Bloody emesis / diarrhea

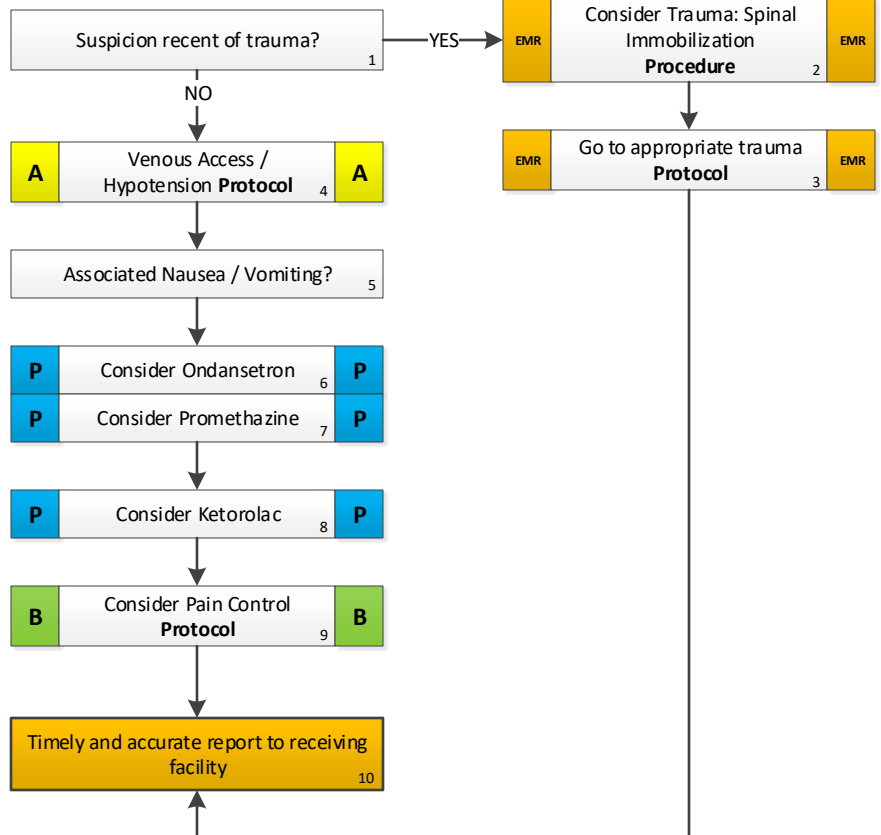
Signs & Symptoms:

- Pain (location / migration)
- Tenderness
- Nausea
- Vomiting
- Diarrhea
- Dysuria
- Constipation
- Vaginal bleeding / discharge
- Pregnancy
- **Associated symptoms:** Fever, headache, weakness, malaise, myalgia, cough, headache, mental status changes, rash

Differential:

- Liver (hepatitis, CHF)
- Gallbladder
- Myocardial infarction
- Pancreatitis
- Kidney stone
- Abdominal Aortic Aneurysm
- Appendicitis
- Pelvic (ectopic pregnancy, ovarian cyst)
- Spleen enlargement
- Muscle spasm / strain
- Herniated disc with nerve compression
- Spine fracture

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P
M	Medical Control	M



Pearls:

- **Recommended Exam: Mental Status, Skin, HEENT, Neck, Heart, Lungs, Abdomen, Back, Extremities, Neuro.**
- **Large amounts of blood coming from ureter or rectum indicates a potential life threatening emergency.**
- Choose the lower dose of promethazine (Phenergan) for patients likely to experience sedative effects (e.g., elderly, debilitated, etc.) Document the mental status and vital signs prior to administration of Promethazine.
- Beware of vomiting only in children. Pyloric stenosis, bowel obstruction, and CNS processes (bleeding, tumors, or increased CSF pressures) all often present with vomiting.
- Orthostatic VS's should never delay transport. Compare supine to sitting VS's while enroute.
- **Abdominal aneurysms are a concern in patients over the age of 50.**
- Kidney stones typically present with an acute onset of flank pain which radiates around to the groin area.
- Patients with midline pain over the spinous processes should be spinally immobilized.
- Any bowel or bladder incontinence is a significant finding which requires immediate medical evaluation
- Abdominal pain in women of childbearing age should be treated as an ectopic pregnancy until proven otherwise.
- Appendicitis may present with vague, peri-umbilical pain which migrates to the RLQ over time.

Altered Mental Status

History:

- Known diabetic, medic alert tag
- Drugs, drug paraphernalia
- Report of illicit drug use or toxic ingestion
- Past medical history
- Medications
- History of trauma
- Change in condition
- Changes in feeding or sleep habits

Signs & Symptoms:

- Decreased mental status or lethargy
- Change in baseline mental status
- Bizarre behavior
- Hypoglycemia (cool, diaphoretic skin)
- Hyperglycemia (warm, dry skin; fruity breath; Kussmaul respirations; signs of dehydration)
- Irritability

Differential:

- Head trauma
- CNS (stroke, tumor, seizure, infection)
- Cardiac (MI, CHF)
- Hypothermia
- Infection (CNS and other)
- Thyroid (hyper / hypo)
- Shock (septic, metabolic, traumatic)
- Diabetes (hyper / hypoglycemia)
- Toxic Ingestion
- Acidosis / Alkalosis
- Environmental exposure
- Pulmonary (Hypoxia)
- Electrolyte abnormality
- Psychiatric disorder

EMR	Emergency Medical Responder	EMR
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M	Medical Control	M

B	Consider Other: Restraints: Chemical / Physical Procedure	B
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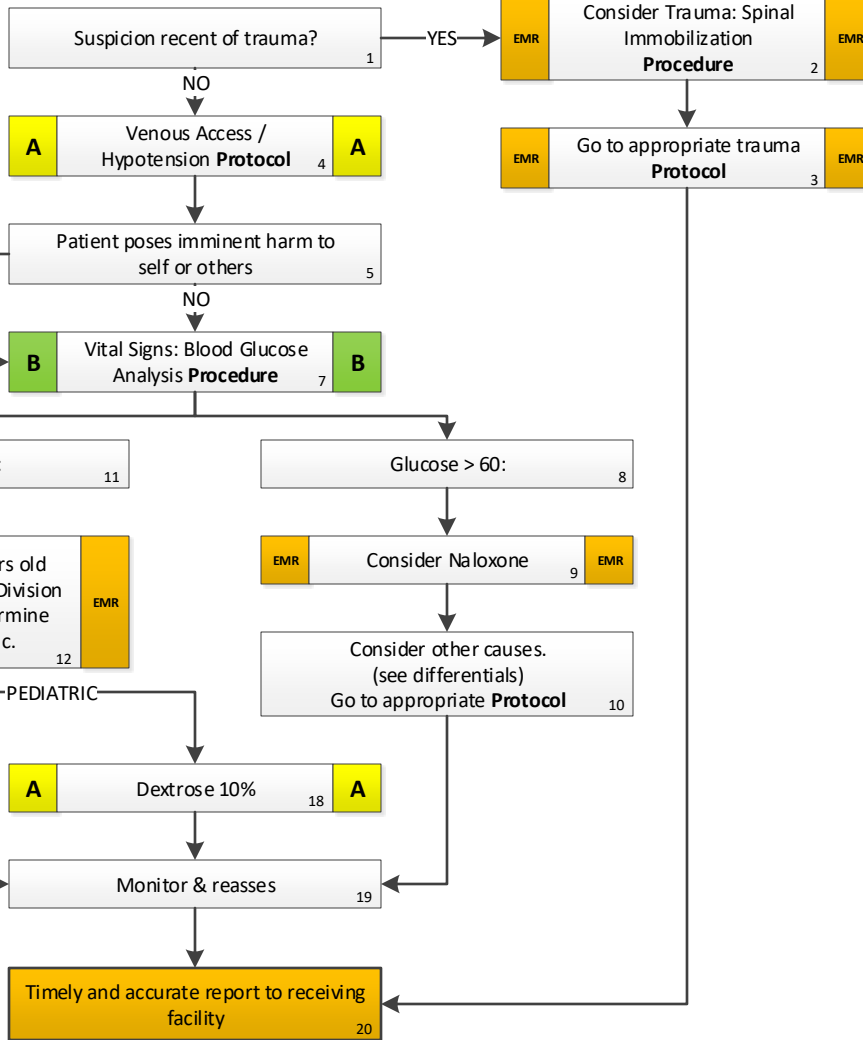
B	Vital Signs: Blood Glucose Analysis Procedure	B
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B	Glucose, Oral (if patient can swallow)	B
---	--	---

P	Consider Thiamine	P
---	-------------------	---

A	Dextrose 10%	A
---	--------------	---

A	Glucagon	A
---	----------	---



Pearls:

- **Recommended Exam: Mental Status, HEENT, Skin, Heart, Lungs, Abdomen, Back, Extremities, Neuro.**
- Pay careful attention to the head exam for signs of bruising or other injury.
- Be aware of AMS as presenting sign of an environmental toxin or Hazardous Material exposure and protect personal safety.
- It is safer to assume hypoglycemia than hyperglycemia if doubt exists. **Recheck blood glucose after Dextrose or Glucagon administration.**
- Do not let alcohol confuse the clinical picture. Alcoholics frequently develop hypoglycemia and may have unrecognized injuries.
 - Low glucose (< 60)
 - Normal glucose (60 - 120)
 - High glucose (120 - 250)
 - Severely high glucose (> 250)
- Consider Restraints if necessary for patient's and/or personnel's protection per the restraint procedure.

Overdose / Toxic Ingestion

History:

- Ingestion or suspected ingestion of a potentially toxic substance
- Substance ingested, route, quantity
- Time of ingestion
- Reason (suicidal, accidental, criminal)
- Available medications in home
- Past medical history, medications

Signs & Symptoms:

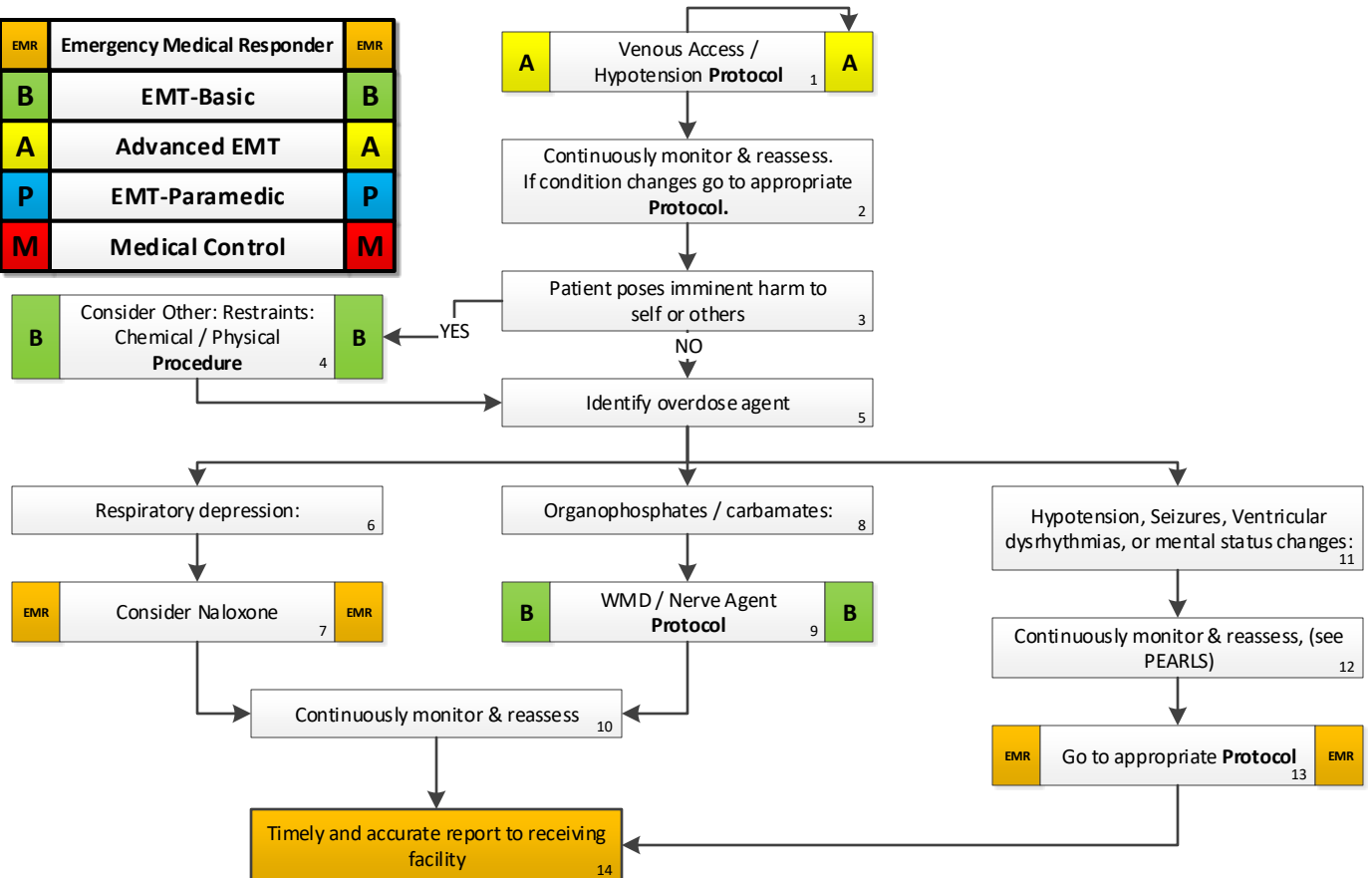
- Mental status changes
- Hypotension / hypertension
- Decreased respiratory rate
- Tachycardia, dysrhythmias
- Seizures

Differential:

- Tricyclic antidepressants (TCAs)
- Acetaminophen (Tylenol)
- Aspirin
- Depressants
- Stimulants
- Anticholinergic
- Cardiac medications
- Solvents, Alcohols, Cleaning agents
- Insecticides (organophosphates)

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M	Medical Control	M

B	Consider Other: Restraints: Chemical / Physical Procedure	B
---	---	---



Pearls:

- **Recommended Exam: Mental Status, HEENT, Skin, Heart, Lungs, Abdomen, Back, Extremities, Neuro.**
- Do not rely on patient history of ingestion, especially in suicide attempts.
- **Make sure patient is still not carrying other medications or has any weapons.**
- Bring bottles, contents, emesis to ED.
- Common overdose medications:
 - **Tricyclic:** 4 major areas of toxicity: seizures, dysrhythmias, hypotension, decreased mental status or coma; rapid progression from alert mental status to death.
 - **Acetaminophen:** Initially normal or nausea/vomiting. If not detected and treated, causes irreversible liver failure.
 - **Aspirin:** Early signs consist of abdominal pain and vomiting. Tachypnea and altered mental status may occur later. Renal dysfunction, liver failure, and or cerebral edema among other things can take place later.
 - **Depressants:** Decreased HR, decreased BP, decreased temperature, decreased respirations, non-specific pupils.
 - **Stimulants:** Increased HR, increased BP, increased temperature, dilated pupils, seizures.
 - **Anticholinergic:** Increased HR, increased temperature, dilated pupils, mental status changes.
 - **Cardiac Medications:** dysrhythmias and mental status changes.
 - **Solvents:** Nausea, coughing, vomiting, and mental status changes.
 - **Insecticides:** Increased or decreased HR, increased secretions, nausea, vomiting, diarrhea, pinpoint pupils.
- In a sedated patient or one who is suspected of suffering from an overdose an absolute end-tidal CO₂ value of 50 mmHg or an increase of >10 mmHg over baseline may indicate respiratory depression.

Seizure

History:

- Reported / witnessed seizure activity
- Previous seizure history
- Medical alert tag information
- Seizure medications
- History of trauma
- History of diabetes
- History of pregnancy

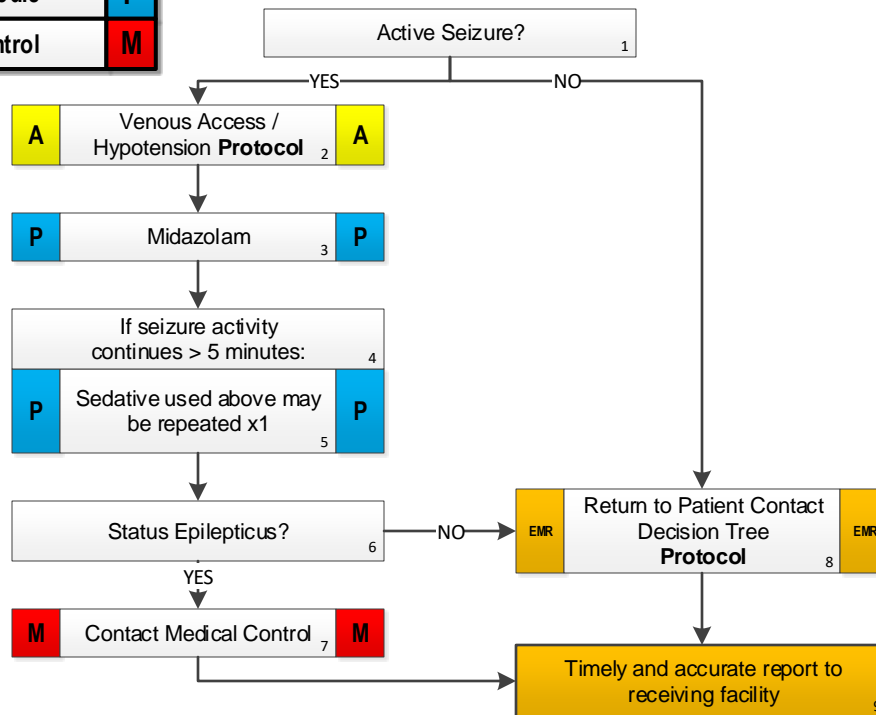
Signs & Symptoms:

- Decreased mental status
- Sleepiness
- Incontinence
- Observed seizure activity
- Evidence of trauma
- Unconscious

Differential:

- CNS (Head) trauma
- Tumor
- Metabolic, Hepatic, or Renal failure
- Hypoxia
- Electrolyte abnormality (Na, Ca, Mg)
- Drugs, Medications,
- Non-compliance
- Infection / Fever
- Alcohol withdrawal
- Eclampsia
- Stroke
- Hyperthermia
- Hypoglycemia

EMR	Emergency Medical Responder	EMR
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Pearls:

- **Recommended Exam: Mental Status, HEENT, Heart, Lungs, Extremities, Neuro.**
- **Repeat doses of benzodiazepines will NOT exceed MAX DOSE without Medical Control.**
- **Medication administration is only indicated if patient is actively seizing.**
- Addressing the ABCs and verifying blood glucose is more important than stopping the seizure.
- Avoiding hypoxemia is extremely important
- **Status Epilepticus is defined as two or more successive seizures without a period of consciousness or recovery. This is a true emergency requiring rapid airway control, treatment, and transport.**
- Grand mal seizures (generalized) are associated with loss of consciousness, possible incontinence, and tongue trauma.
- Focal seizures (petit mal) effect only a part of the body and do not usually result in a loss of consciousness.
- Jacksonian seizures are seizures which start as a focal seizure and become generalized.
- Be prepared to assist ventilations especially if a benzodiazepine is used.

Suspected Stroke

History:

- Previous CVA, TIA's
- Previous cardiac / vascular surgery
- Associated diseases: diabetes, hypertension, CAD
- Atrial fibrillation
- Medications (blood thinners)
- History of trauma

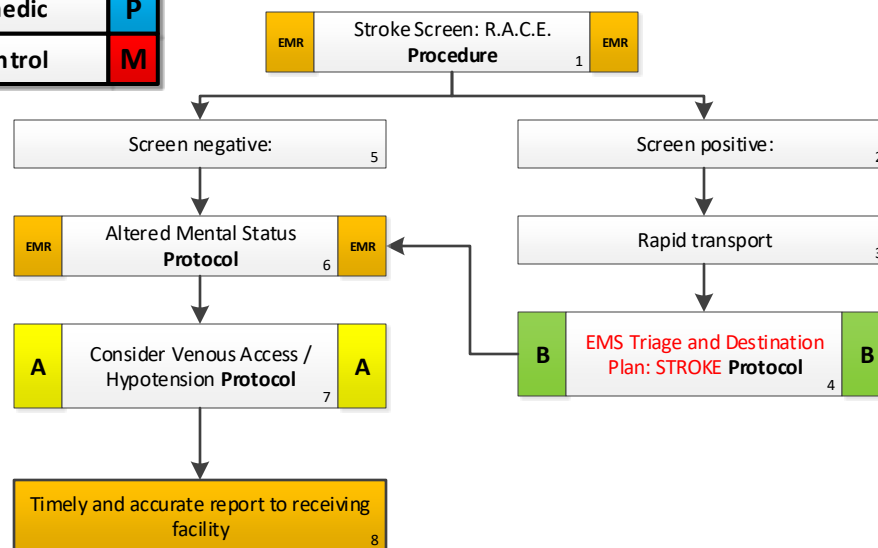
Signs & Symptoms:

- Altered mental status
- Weakness / Paralysis
- Blindness or other sensory loss
- Aphasia / Dysarthria
- Syncope
- Vertigo / Dizziness
- Vomiting
- Headache
- Seizures
- Respiratory pattern change
- Hypertension / hypotension

Differential:

- See Altered Mental Status
- TIA (Transient ischemic attack)
- Seizure
- Hypoglycemia
- Stroke
 - Thrombotic or Embolic (~85%)
 - Hemorrhagic (~15%)
- Tumor
- Trauma

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
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M	Medical Control	M



Pearls:

- **Recommended Exam: Mental Status, HEENT, Heart, Lungs, Abdomen, Extremities, Neuro**
- The Reperfusion Checklist should be completed for any suspected stroke patient.
- Scene times should be limited to 10 minutes.
- Onset of symptoms is defined as the last witnessed time the patient was symptom free (i.e. awakening with stroke symptoms would be defined as an onset time of the previous night when patient was symptom free)
- The differential listed on the Altered Mental Status Protocol should also be considered.
- Elevated blood pressure is commonly present with stroke.
- Be alert for airway problems (swallowing difficulty, vomiting/aspiration).
- Hypoglycemia can present as a localized neurologic deficit, especially in the elderly.
- Document the Stroke Screen results in the PCR.
- Scene times, defined from "patient contact" to "left scene," greater than 10 minutes must be explained in the narrative

Bite / Envenomation

History:

- Type of bite / sting
- Description or bring creature / photo with patient for identification
- Time, location, size of bite / sting
- Previous reaction to bite / sting
- Domestic vs. Wild
- Tetanus and Rabies risk
- Immunocompromised patient

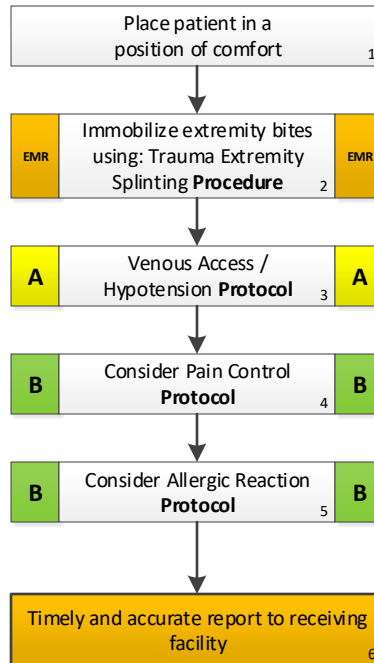
Signs & Symptoms:

- Rash, skin break, wound
- Pain, soft tissue swelling, redness
- Blood oozing from the bite wound
- Evidence of infection
- Shortness of breath, wheezing
- Allergic reaction, hives, itching
- Hypotension or shock

Differential:

- Human bite
- Snake bite (poisonous?)
- Spider bite (poisonous?)
- Insect sting / bite (bee, wasp, ant, tick)
- Infection risk
- Rabies risk
- Tetanus risk

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P
M	Medical Control	M



Pearls:

- **Recommended Exam: Mental Status, Skin, Extremities (Location of injury), and a complete Neck, Lung, Heart, Abdomen, Back, and Neuro exam if systemic effects are noted.**
- **AVOID ICE in snake bite situations.**
- Human bites have higher infection rates than animal bites due to normal mouth bacteria.
- Carnivore bites are much more likely to become infected and all have risk of Rabies exposure.
- Cat bites may progress to infection rapidly due to a specific bacteria (Pasteurella multocida).
- Poisonous snakes in this area are generally of the pit viper family: rattlesnake, copperhead, and water moccasin.
- **Coral snake bites are rare: Very little pain but very toxic. "Red on yellow - kill a fellow, red on black - venom lack."**
- Amount of envenomation is variable, generally worse with larger snakes and early in spring.
- If no pain or swelling, envenomation is unlikely.
- Black Widow spider bites tend to be minimally painful, but over a few hours, muscular pain and severe abdominal pain may develop (spider is black with red hourglass on belly).
- Brown Recluse spider bites are minimally painful to painless. Little reaction is noted initially but tissue necrosis at the site of the bite develops over the next few days (brown spider with fiddle shape on back).
- Evidence of infection: swelling, redness, drainage, fever, red streaks proximal to wound.
- Immunocompromised patients are at an increased risk for infection: diabetes, chemotherapy, transplant patients.
- **There is no data to suggest that holding a snake bite site above or below the heart is beneficial.**
- **Constricting bands are not useful in snake bites and may worsen outcome**

Burn Algorithm

History:

- Type of exposure (heat, gas, chemical)
- Inhalation injury
- Time of Injury
- Past medical history and Medications
- Other trauma
- Loss of Consciousness
- Tetanus/Immunization status

Signs & Symptoms:

- Burns, pain, swelling
- Dizziness
- Loss of consciousness
- Hypotension/shock
- Airway compromise/distress
- Singed facial or nasal hair
- Hoarseness / wheezing

Differential:

- Superficial (1st Degree)
 - Red and painful
- Partial Thickness (2nd Degree)
 - Blistering
- Full Thickness (3rd Degree)
 - Painless/charred or leathery skin
- Thermal
- Chemical
- Electrical
- Radiation

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Place patient in a position of comfort



CRITICAL

- > 15% Total Burn Surface Area 2nd/3rd Degree Burn
- Burns with Multiple Trauma
- Burns with definitive airway compromise
- TRANSPORT to a burn center

SERIOUS

- 5 - 15% Total Burn Surface Area 2nd/3rd Degree Burn
- Suspected inhalation injury or requiring intubation for airway stabilization
- Hypotension or GCS < 14
- TRANSPORT to a burn center or trauma center

MINOR

- < 5% Total Burn Surface Area 2nd/3rd Degree Burn
- No inhalation injury, not intubated, normotensive
- GCS > 14
- TRANSPORT to hospital of choice

2

3

4

B

For eye involvement:

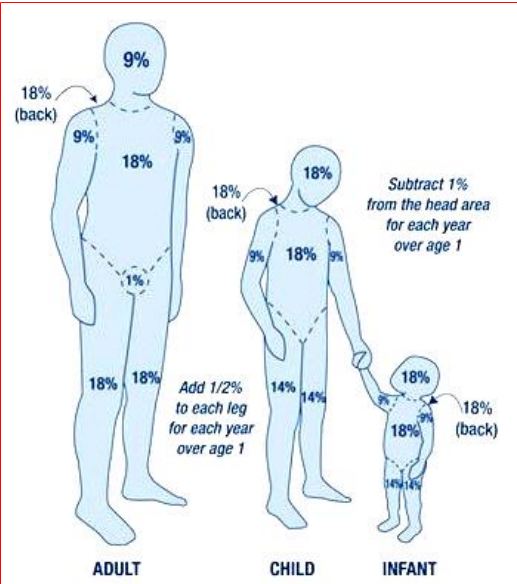
- Continuous saline flush in affected eye.
- Flush area with water or Normal Saline for 10-15 minutes
- Remove clothing or expose area.
- Remove rings, bracelets, and other constricting items.
- Cover burn with dry sterile dressing.

B

5

EMR Cool wound with normal saline 9 EMR

EMR Cover burn with dry sterile dressing. 10 EMR



A

Venous Access / Hypotension Protocol 6 **A**

Rapid transport 7

B

EMS Triage and Destination Plan: TRAUMA Protocol 8 **B**

B Consider Pain Control Protocol 11 **B**

Timely and accurate report to receiving facility 12

Trauma Protocols

Burn Pearls

CRITICAL

- > 15% Total Burn Surface Area 2nd/3rd Degree Burn
- Burns with Multiple Trauma
- Burns with definitive airway compromise
- TRANSPORT to a burn center

SERIOUS

- 5 - 15% Total Burn Surface Area 2nd/3rd Degree Burn
- Suspected inhalation injury or requiring intubation for airway stabilization
- Hypotension or GCS < 14
- TRANSPORT to a burn center or trauma center

MINOR

- < 5% Total Burn Surface Area 2nd/3rd Degree Burn
- No inhalation injury, not intubated, normotensive
- GCS > 14
- TRANSPORT to hospital of choice

Critical Burns:

- **Critical or Serious Burns > 5-15% total body surface area (TBSA);**
- 2nd or 3rd degree burns, or
- 3rd degree burns > 5% TBSA for any age group, or
 - circumferential burns of extremities, or
 - electrical or lightning injuries, or
 - suspicion of abuse or neglect, or
 - inhalation injury, or
 - chemical burns, or
 - burns of face, hands, perineum, or feet, or
 - any burn requiring hospitalization.
- These burns will require direct transport to a burn center, or transfer once seen at a local facility where the patient can be stabilized with interventions such as airway management or pain relief if this is not available in the field or the distance to a Burn Center is significant.

Thermal Pearls:

- **Burn patients are Trauma Patients, evaluate for multisystem trauma.**
- Assure whatever has caused the burn, is no longer contacting the injury.
(Stop the burning process!)
- Recommended Exam: Mental Status, HEENT, Neck, Heart, Lungs, Abdomen, Extremities, Back, and Neuro.
- Early intubation is required when the patient experiences significant inhalation injuries. Follow airway protocol.
- Potential CO exposure should be treated with 100% oxygen. (For patients with the primary event is CO inhalation, transport to a hospital equipped with a hyperbaric chamber is indicated [when reasonably accessible].)
- Circumferential burns to extremities are dangerous due to potential vascular compromise secondary to soft tissue swelling.
- Burn patients are prone to hypothermia - never apply ice or cool burns, must maintain normal body temperature.
- Evaluate the possibility of child abuse with children and burn injuries.

Chemical Pearls:

- **Refer to Decontamination Standard**
- Procedure (Skill) WMD Page
- Certainly 0.9% Normal Saline or Sterile Water is preferred, however if it is not readily available, do not delay, use tap water for flushing the affected area or other immediate water sources.
- Flush the area as soon as possible with the cleanest readily available water or saline solution using copious amounts of fluids.

Electrical Pearls:

- **Do not contact the patient until you are certain the source of the electric shock has been disconnected.**
- Attempt to locate contact points, (entry wound where the AC source contacted the patient, an exit at the ground point) both sites will generally be full thickness.
- Cardiac monitor, anticipate ventricular or atrial irregularity, to include V-tach, Vfib, heart blocks, etc.
- Attempt to identify the nature of the electrical source (AC vs DC), the amount of voltage and the amperage the patient may have been exposed to during the electrical shock.

Drowning

History:

- Submersion in water regardless of depth
- Possible trauma to C-spine
- Possible history of trauma ie: diving board
- Duration of immersion
- Temperature of water or possibility of hypothermia

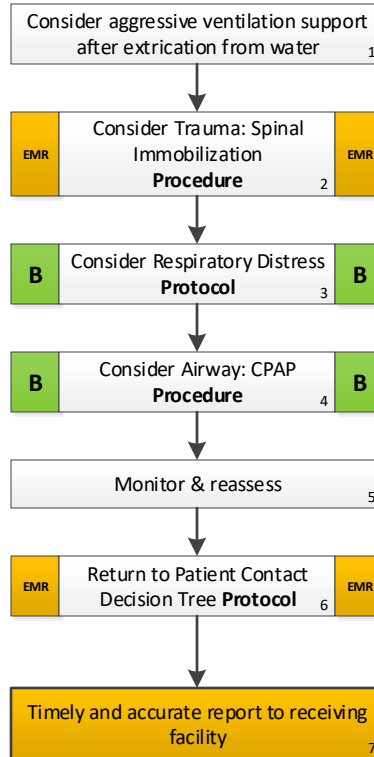
Signs & Symptoms:

- Unresponsive
- Mental status changes
- Decreased or absent vital signs
- Vomiting
- Coughing
- Apnea
- Stridor
- Wheezing
- Rales

Differential:

- Trauma
- Pre-existing medical problem
- Pressure injury (diving)
- Barotrauma
- Decompression sickness
- Post-immersion syndrome

EMR	Emergency Medical Responder	EMR
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P	EMT-Paramedic	P
M	Medical Control	M



Trauma Protocols

Pearls:

- **Recommended Exam: Trauma Survey, Head, Neck, Chest, Abdomen, Pelvis, Back, Extremities, Skin, Neuro-**
- Have a high index of suspicion for possible spinal injuries.
- With cold water no time limit – resuscitate all. These patients have an increased chance of survival.
- **Some patients may develop delayed respiratory distress or secondary drowning which can develop hours later.**
- All victims should be transported for evaluation due to potential for worsening over the next several hours.
- Drowning is a leading cause of death among would-be rescuers.
- With pressure injuries (decompression / barotrauma), consider transport to or availability of a hyperbaric chamber.

Hyperthermia

History:

- Age
- Exposure to increased temperatures and / or humidity
- Past medical history / medications
- Extreme exertion
- Time and length of exposure
- Poor PO intake
- Fatigue and / or muscle cramping

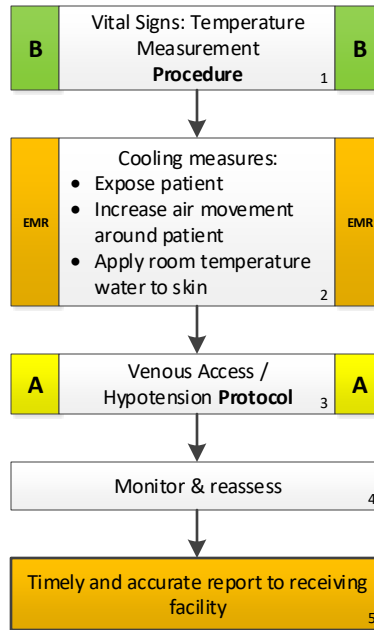
Signs & Symptoms:

- Altered mental status or unconsciousness
- Hot, dry or sweaty skin
- Hypotension or shock
- Seizures
- Nausea

Differential:

- Fever (Infection)
- Dehydration
- Medications/Malignant Hyperthermia
- Hyperthyroidism (Storm)
- Delirium tremens (DT's)
- Heat cramps
- Heat exhaustion
- Heat stroke
- CNS lesions or tumors

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Pearls:

- **Recommended Exam: Mental Status, Skin, HEENT, Heart, Lungs, Neuro.**
- Extremes of age are more prone to heat emergencies (i.e. young and old).
- Predisposed by use of: tricyclic antidepressants, phenothiazine's, anticholinergic medications, and alcohol.
- Cocaine, Amphetamines, and Salicylates may elevate body temperatures.
- Sweating generally disappears as body temperature rises above 104° F (40° C).
- **Intense shivering may occur as patient is cooled – which should be avoided.**
- Heat Cramps: consists of benign muscle cramping 2° to dehydration and is not associated with an elevated temperature.
- Heat Exhaustion: consists of dehydration, salt depletion, dizziness, fever, mental status changes, headache, cramping, nausea and vomiting. Vital signs usually consist of tachycardia, hypotension, and an elevated temperature.
- Heat Stroke: consists of dehydration, tachycardia, hypotension, temperature > 104° F (40° C), and an altered mental status.

Hypothermia

History:

- Past medical history
- Medications
- Exposure to environment even in normal temperatures
- Exposure to extreme cold
- Extremes of age
- Drug use: Alcohol, barbiturates
- Infections / Sepsis
- Length of exposure / Wetness

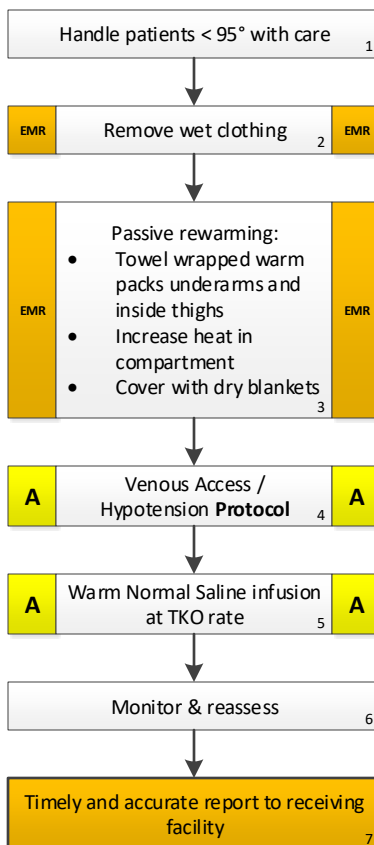
Signs & Symptoms:

- Cold, clammy
- Shivering
- Mental status changes
- Extremity pain or sensory abnormality
- Bradycardia
- Hypotension or shock

Differential:

- Environmental exposure
- Hypoglycemia
- CNS dysfunction
- Stroke
- Head injury
- Spinal cord injury

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Pearls:

- **Recommended Exam: Mental Status, Heart, Lungs, Abdomen, Extremities, Neuro**
- **NO PATIENT IS DEAD UNTIL 95 DEG RECTAL AND DEAD or findings incompatible with life.**
- Defined as core temperature < 35° C (95° F).
- Extremes of age are more susceptible (i.e. young and old).
- With core temperature less than 30° C (86° F):
 - Ventricular fibrillation is common cause of death. Handling patients gently may prevent this.
 - Pacing/Defibrillation should not be done.
 - Defibrillate 1 time if defibrillation is required and withhold IV medicines.
- Normal defibrillation procedure may resume once patient reaches 30 degrees C or 86 F.
- If the temperature is unable to be measured, treat the patient based on the suspected temperature.
- Hypothermia may produce severe bradycardia.
- Hot packs can be activated and placed in the armpit and groin area if available. Care should be taken not to place packs directly against the patients skin.
- Intubation can cause ventricular fibrillation as can hyperventilation

Extremity Trauma

History:

- Type of injury
- Mechanism: crush / penetrating / amputation
- Time of injury
- Open vs. closed wound / fracture
- Wound contamination
- Medical history
- Medications

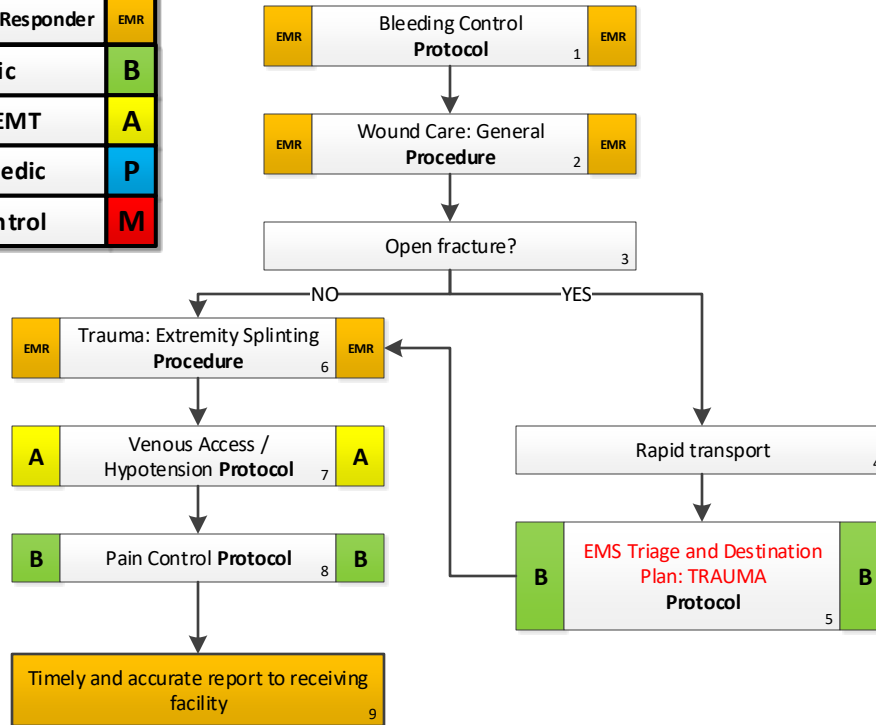
Signs & Symptoms:

- Pain, swelling
- Deformity
- Altered sensation / motor function
- Diminished pulse / capillary refill
- Decreased extremity temperature

Differential:

- Abrasion
- Contusion
- Laceration
- Sprain
- Dislocation
- Fracture
- Amputation

EMR	Emergency Medical Responder	EMR
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Pearls:

- **Recommended Exam: Mental Status, Extremity, Neuro.**
- Peripheral neurovascular status is important
- In amputations, time is critical. Notify medical control immediately, so that the appropriate destination can be determined.
- For patients trapped by a partially amputated limb, call Medical Control to request a trauma surgeon on scene.
- Hip dislocations and knee and elbow fracture / dislocations have a high incidence of vascular compromise.
- Urgently transport any injury with vascular compromise.
- Blood loss may be concealed or not apparent with extremity injuries.

Head Trauma

History:

- Time of injury
- Mechanism (blunt vs. penetrating)
- Loss of consciousness
- Bleeding
- Past medical history
- Medications
- Evidence for multi-trauma

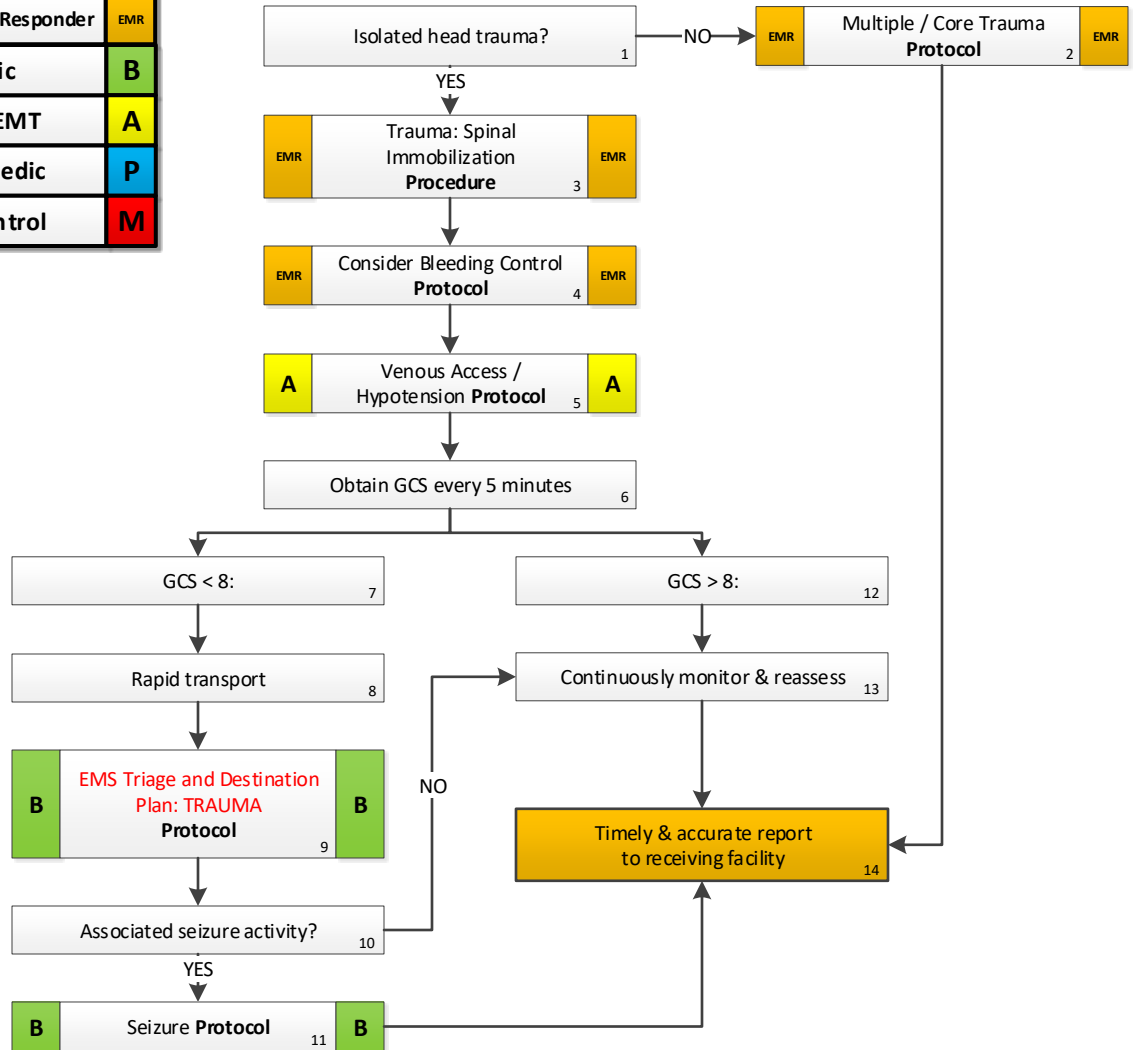
Signs & Symptoms:

- Pain, swelling, bleeding
- Altered mental status
- Unconscious
- Respiratory distress / failure
- Vomiting
- Major traumatic mechanism of injury
- Seizure

Differential:

- Skull fracture
- Brain injury
 - Concussion
 - Contusion
 - Hemorrhage
 - Laceration
- Epidural hematoma
- Subdural hematoma
- Subarachnoid hemorrhage
- Spinal injury
- Abuse

EMR	Emergency Medical Responder	EMR
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Trauma Protocols

Pearls:

- **Recommended Exam: Mental Status, HEENT, Heart, Lungs, Abdomen, Extremities, Back, Neuro.**
- Increased intracranial pressure (ICP) may cause hypertension and bradycardia (Cushing's Response).
- Hypotension usually indicates injury or shock unrelated to the head injury and should be aggressively treated.
- The most important item to monitor and document is a change in the level of consciousness.
- Consider Restraints if necessary for patient's and/or personnel's protection per the Other: Restraints: Chemical / Physical Procedure.
- **Concussions are periods of confusion or LOC associated with trauma which may have resolved by the time EMS arrives. Any prolonged confusion or mental status abnormality which does not return to normal within 15 minutes or any documented loss of consciousness should be evaluated by a physician ASAP.**
- In areas with short transport times, intubation is not recommended for patients who are spontaneously breathing and who have oxygen saturations of greater than 92% with supplemental oxygen. Evidence suggests that endotracheal intubation of the patient with a head injury may have a negative effect on that patient's outcome.

Multiple / Core Trauma

History:

- Time and mechanism of injury
- Damage to structure or vehicle
- Location in structure or vehicle
- Others injured or dead
- Speed and details of MVC
- Restraints / protective equipment
- Past medical history
- Medications

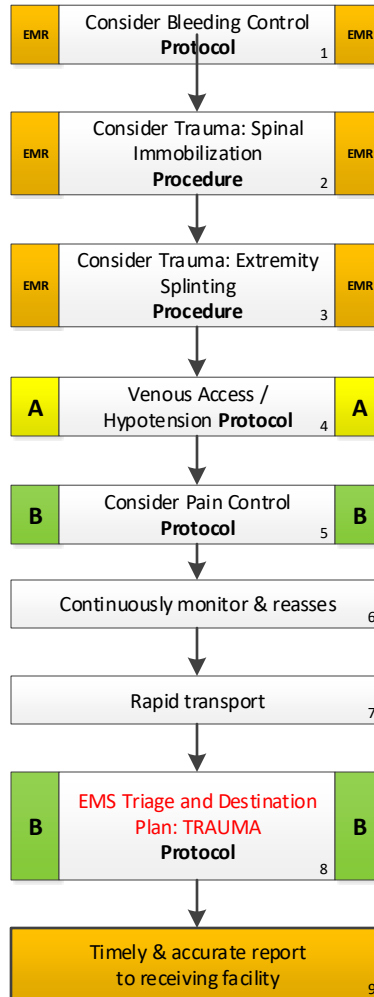
Signs & Symptoms:

- Pain, swelling
- Deformity, lesions, bleeding
- Altered mental status or unconscious
- Hypotension or shock
- Arrest

Differential:

- Chest Tension pneumothorax
- Flail chest
- Pericardial tamponade
- Open chest wound
- Hemothorax
- Intra-abdominal bleeding
- Pelvis / Femur fracture
- Spine fracture / Cord injury
- Head injury (see Head Trauma)
- Extremity fracture / Dislocation
- HEENT (Airway obstruction)
- Hypothermia

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P
M	Medical Control	M



Pearls:

- **Recommended Exam: Mental Status, Skin, HEENT, Heart, Lung, Abdomen, Extremities, Back, Neuro-**
- Transport Destination is chosen based on the EMS System Trauma Plan with EMS pre-arrival notification.
- Geriatric patients should be evaluated with a high index of suspicion. Often occult injuries are more difficult to recognize and patients can decompensate unexpectedly with little warning.
- Mechanism is the most reliable indicator of serious injury.
- In prolonged extrications or serious trauma, consider air transportation for transport times and the ability to give blood.
- Do not overlook the possibility of associated domestic violence or abuse.
- Scene times should not be delayed for procedures. These should be performed en route when possible. Rapid transport of the unstable trauma patient is the goal. IV fluid boluses have not been shown to improve outcome and will not delay transport.
- Scene times (patient contact to left scene) greater than 10 minutes must be explained in the narrative

Decontamination

History:

- Type of exposure:
 - Gas
 - Liquid
 - Solid
- Time of exposure
- Extent of on scene decontamination
- Presence of an illegal laboratory producing methamphetamine

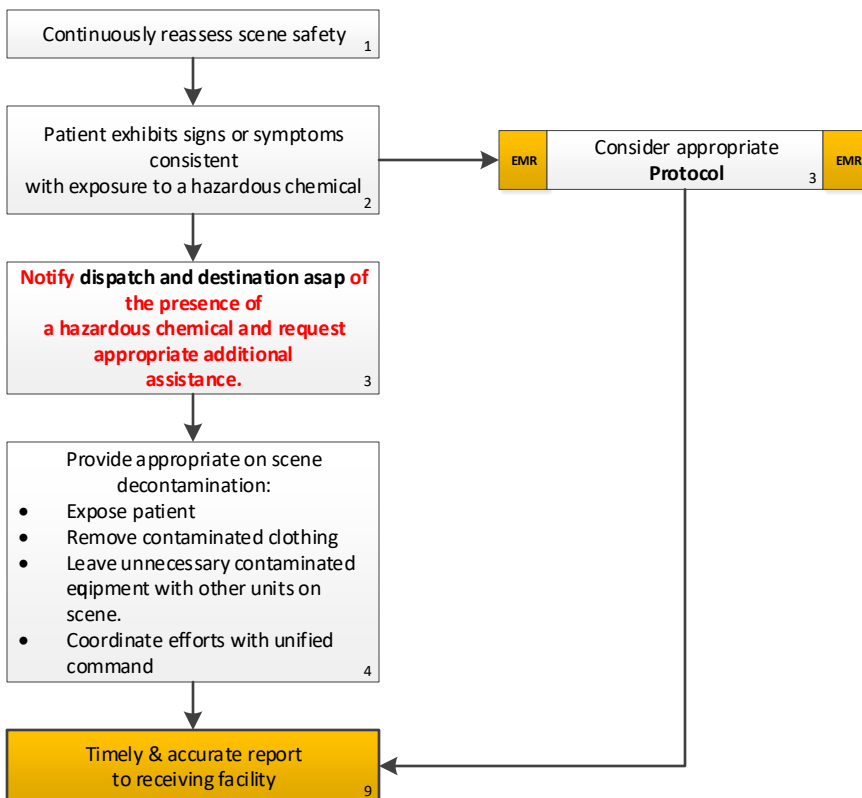
Signs & Symptoms:

- Wheezing
- Shortness of breath
- Superficial burns
- Detectable odor
- Mental status change
- Skin or mucous membrane irritation of provider

Differential:

- Caustic liquid or vapor
- Petroleum product (gasoline, diesel)
- Radiologic contamination
- ANY SUBSTANCE WHICH CAN DISRUPT THE ACTIVITIES OF THE HEALTH CARE SYSTEM BY ITS PRESENCE SHOULD BE CONSIDERED HAZARDOUS

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P
M	Medical Control	M



Pearls:

- Arriving at a destination hospital without prior notification of the presence of a contaminated patient will delay patient care
- Ensure personal safety
- Assist with the decontamination process for your patient, and then be prepared to be decontaminated

WMD / Nerve Agent

History:

- Exposure to chemical, biologic, radiologic, or nuclear hazard
- Potential exposure to unknown substance/hazard

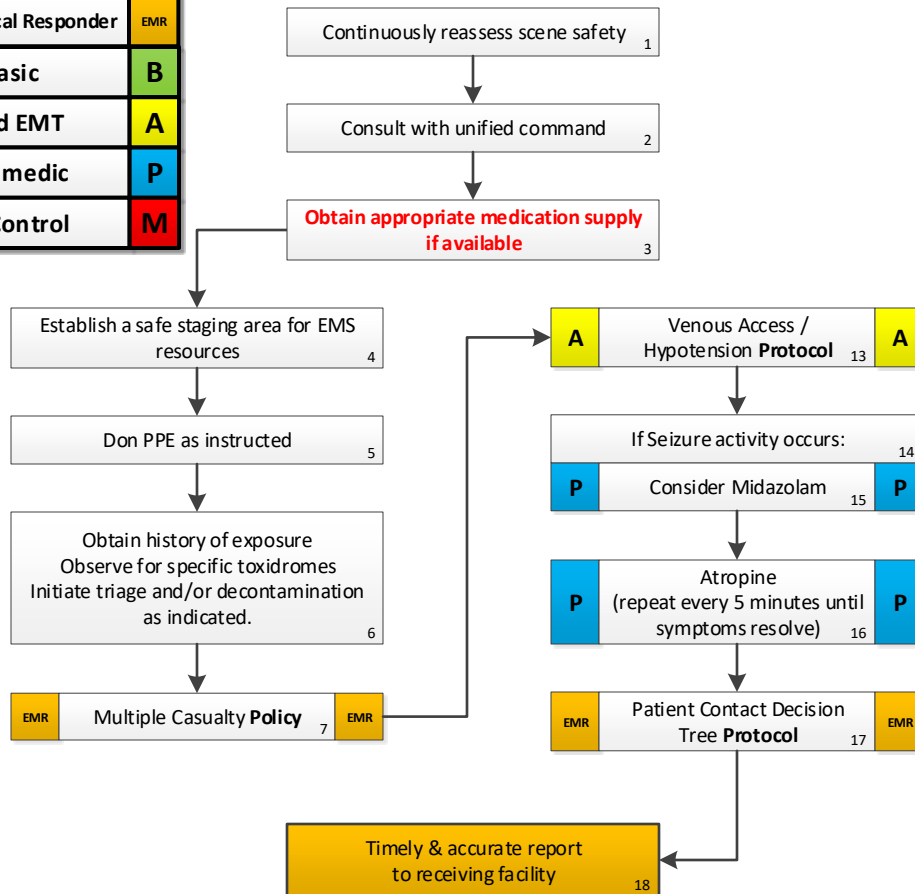
Signs & Symptoms:

- Visual Disturbances
- Headache
- Nausea/Vomiting
- Salivation
- Lacrimation
- Respiratory Distress
- Diaphoresis
- Seizure Activity
- Respiratory Arrest

Differential:

- Nerve agent exposure (e.g., VX, Sarin, Soman, etc.)
- Organophosphate exposure (pesticide)
- Vesicant exposure (e.g., Mustard Gas, etc.)
- Respiratory Irritant Exposure (e.g., Hydrogen Sulfide, Ammonia, Chlorine, etc.)

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P
M	Medical Control	M



Pearls:

- In the face of a bona fide attack, begin with 1 Nerve Agent Kit for patients less than 7 years of age, 2 Nerve Agent Kits from 8 to 14 years of age, and 3 Nerve Agent Kits for patients 15 years of age and over.
- Nerve Agent Kits will have to be obtained through EMS chain of command or Medical Control.
- If Triage/MCI issues exhaust supply of Nerve Agent Kits, use atropine. Use the 0.5 mg dose if patient is less than 40 pounds (18 kg), 1 mg dose if patient weighs between 40 to 90 pounds (18 to 40 kg), and 2 mg dose for patients greater than 90 pounds (> 40 kg).
- Follow local HAZMAT protocols for decontamination and use of personal protective equipment.
- For patients with major symptoms, there is no limit for atropine dosing.
- Carefully evaluate patients to ensure they not from exposure to another agent (e.g., narcotics, vesicants, etc.)
- The main symptom that the atropine addresses is excessive secretions so atropine should be given until salivation improves.

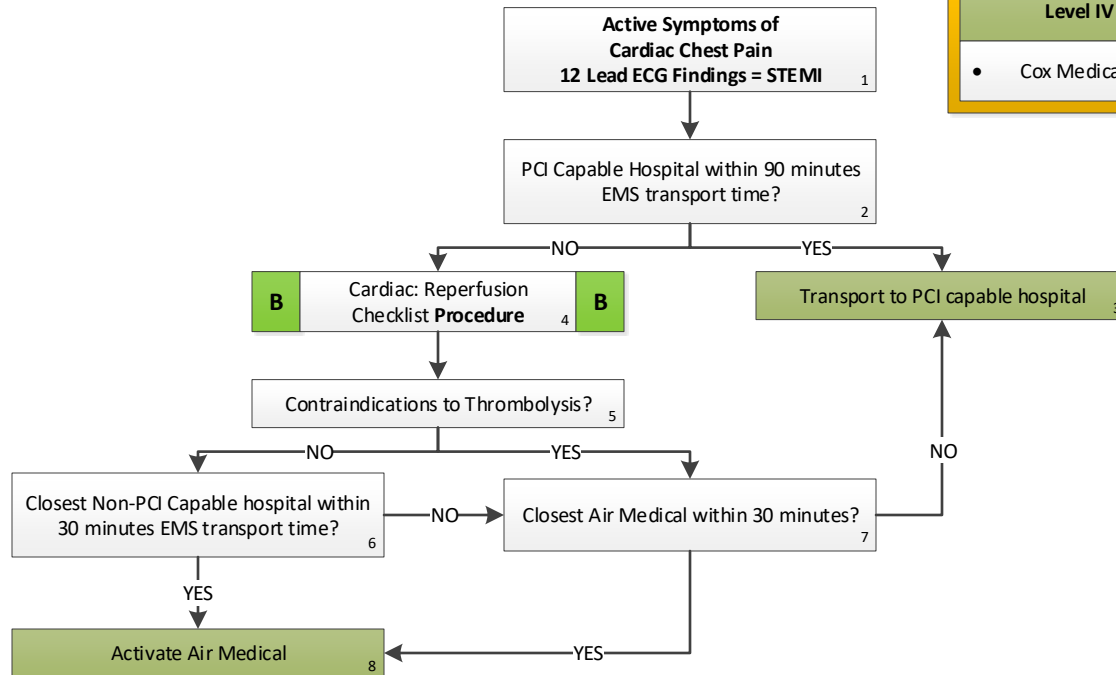
EMS Triage and Destination Plan: STEMI

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P
M	Medical Control	M

- Level I STEMI Centers:**
- Cox Medical Center South
 - Mercy Health Center Springfield

- Level II STEMI Centers:**
- Citizens Memorial Hospital
 - Ozarks Medical Center
 - Cox Medical Center Branson

- Level IV STEMI Centers:**
- Cox Medical Center Monett



Pearls:

- All STEMI Patients must be triaged and transported using this plan.
- Refer to Patient Contact Decision Tree Protocol for patient care.
- PCI hospital:** A hospital with an emergency interventional cardiac catheterization laboratory capable of providing the following services to acute STEMI patients: (**Free standing emergency departments and satellite facilities are not considered part of the PCI capable hospital.**)
 - 24/7 PCI capability within 30 minutes of notification (interventional cardiologist present at the start of the case)
 - Single Call Activation number for use by EMS
 - Accepts all patients regardless of bed availability
 - Provides outcome and performance measure feedback to EMS including case review
- Non-PCI Hospital:** A local hospital within the EMS System's service area which provides emergency care, including thrombolytic administration, to an acute STEMI patient but does NOT provide PCI services.

EMS Triage and Destination Plan: **STROKE**

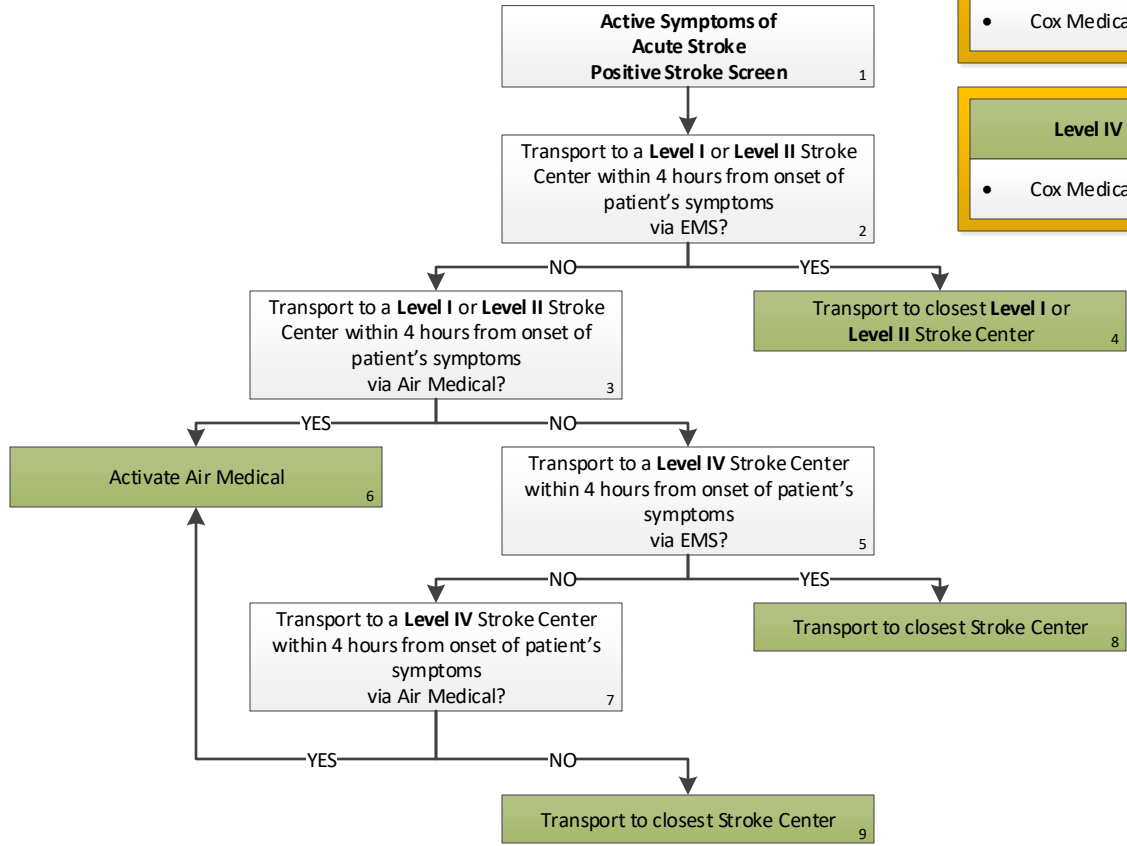
EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P
M	Medical Control	M

- Level I Stroke Centers:**
- Cox Medical Center South

- Level II Stroke Centers:**
- Mercy Health Center Springfield
 - Ozarks Medical Center

- Level III Stroke Centers:**
- Cox Medical Center Branson

- Level IV Stroke Centers:**
- Cox Medical Center Monett



Special Circumstances Protocols

Pearls:

- All STROKE Patients must be triaged and transported using this plan.**
- Refer to Patient Contact Decision Tree Protocol for patient care.
- Level I Stroke Center:** A hospital which is currently accredited by the Joint Commission as a Level I Stroke Center. **(Free standing emergency departments and satellite facilities are not consider part of the Level I Stroke Center)**
- Stroke Centers:**
 - CT availability with in-house technician availability 27/7/365
 - Ability to rapidly evaluate an acute stroke patient to identify patients who would benefit from thrombolytic administration
 - Ability and willingness to administer thrombolytic agents to eligible acute Stroke patients
 - Accepts all patients regardless of bed availability
 - Provides outcome and performance measure feedback to EMS including case review
- Non-Stroke Center Hospital:** A local hospital within the EMS System's service area which provides emergency care but does not meet the criteria for a Stroke Center.

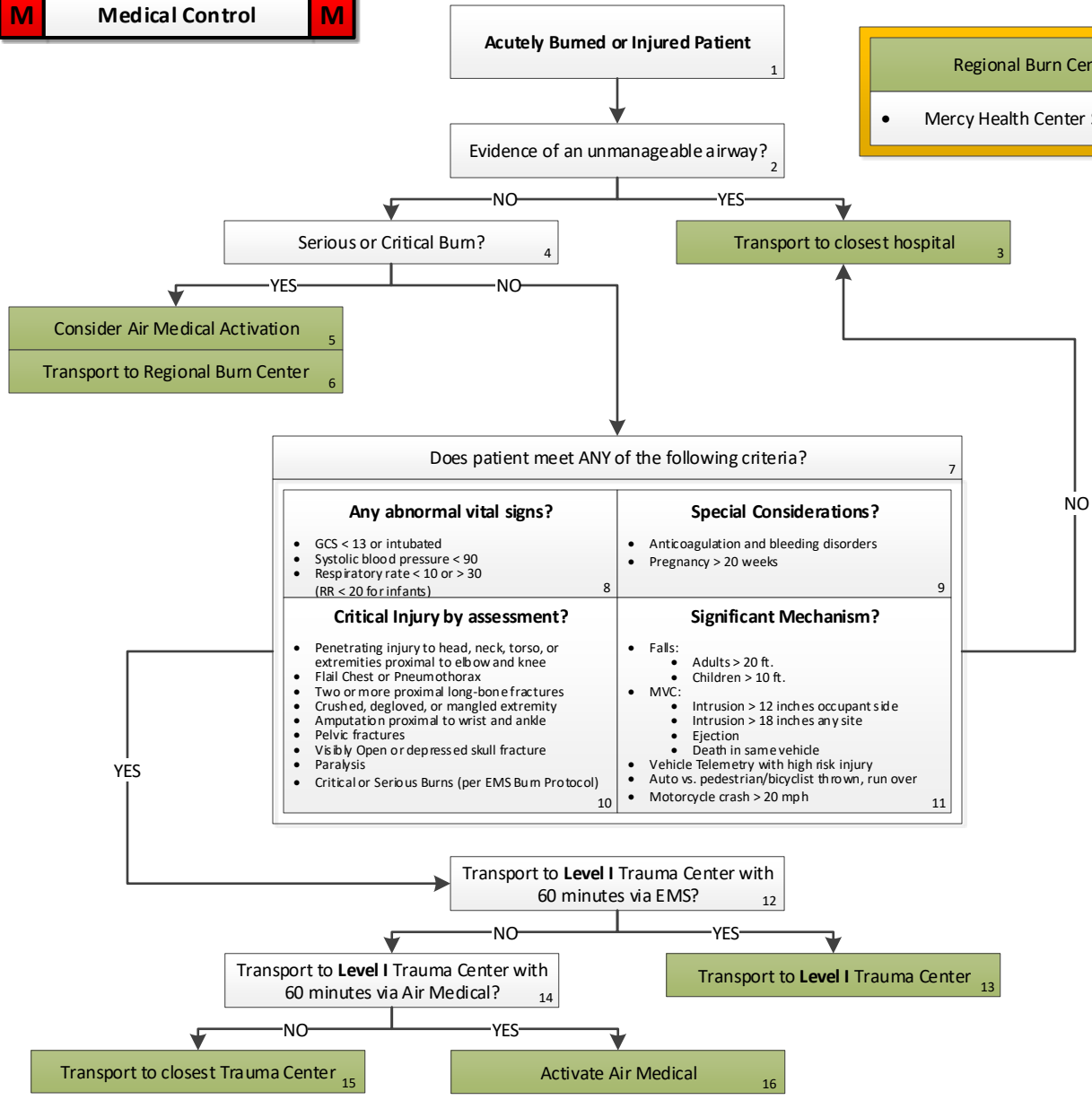
EMS Triage and Destination Plan: TRAUMA

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P
M	Medical Control	M

- Level I Trauma Centers:**
- Cox Medical Center South
 - Mercy Health Center Springfield

- Level III Trauma Centers:**
- Citizens Memorial Hospital

- Regional Burn Center:**
- Mercy Health Center Springfield

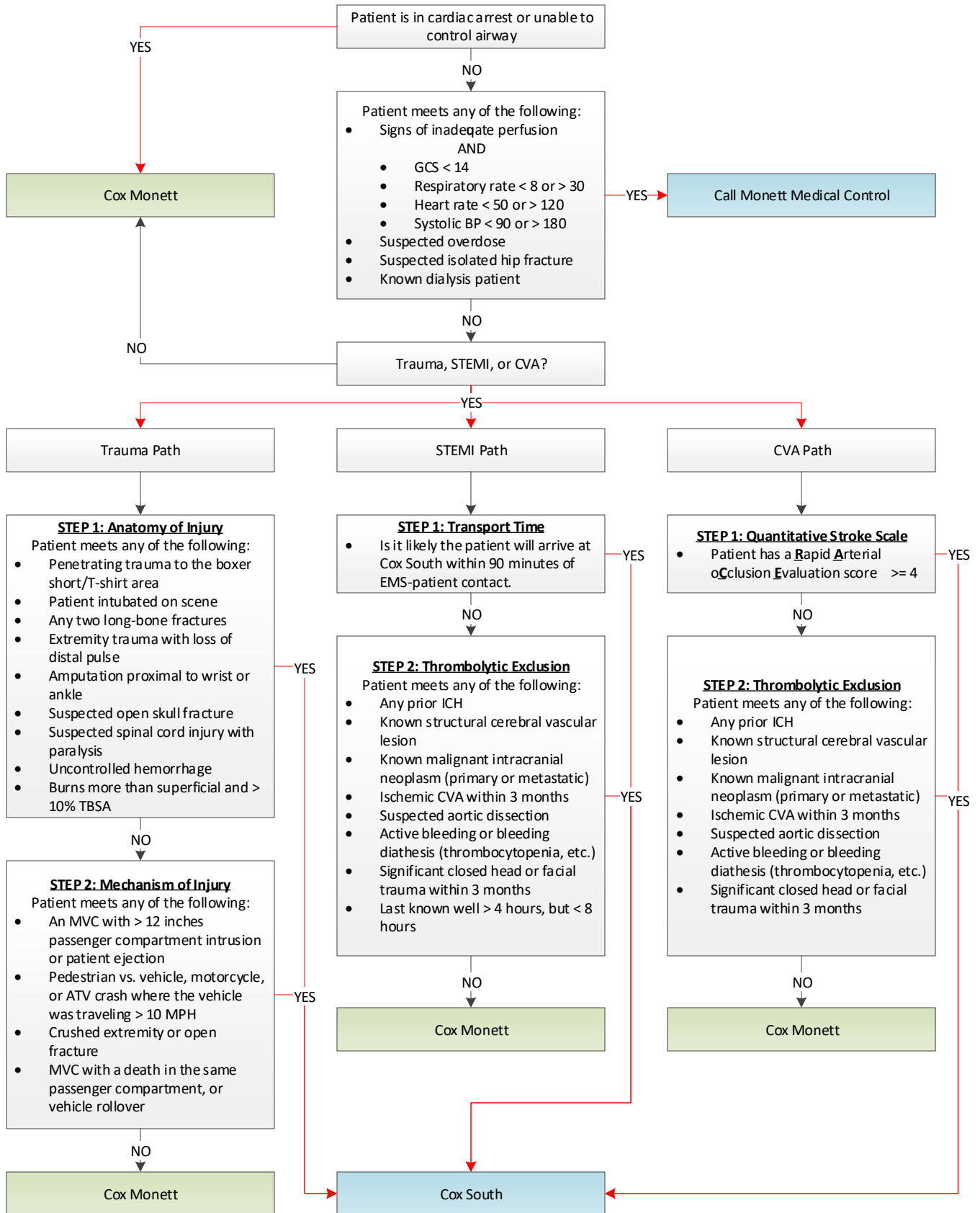


Special Circumstances Protocols

Pearls:

- All potentially critical TRAUMA & Burn Patients must be triaged and transported using this plan.
- Refer to Patient Contact Decision Tree Protocol for patient care.
- Transport Destination is chosen based on the EMS System Trauma Plan with EMS pre-arrival notification.
- Scene times should not be delayed for procedures. These should be performed en route when possible. Rapid transport of the unstable trauma patient is the goal. IV fluid boluses have not been shown to improve outcome and will not delay transport.
- Bag valve mask is an acceptable method of managing the airway if pulse oximetry can be maintained above 92%
- Scene times (patient contact to left scene) greater than 10 minutes must be explained in the narrative.

Monett Diversion Plan



Procedures

1. Assessment: Adult
2. Assessment: Pediatric
1. Airway: BIAD
2. Airway: CPAP
3. Airway: Nebulizer Inhalation Therapy
4. Airway: Suctioning, Basic
5. Airway: Suctioning, Advanced
6. Airway: Cricothyrotomy
7. Airway: Foreign Body Obstruction
8. Airway: Intubation, Confirmation
9. Airway: Intubation, Nasal-Tracheal
10. Airway: Intubation, Oral-Tracheal
11. Airway: Intubation, Drug Assisted
12. Airway: Ventilator Operation
13. Airway: Thoracic Needle Decompression
1. Cardiac: 12 Lead ECG
2. Cardiac: External Pacing
3. Cardiac: Cardiopulmonary Resuscitation (CPR)
4. Cardiac: Auto-Pulse
5. Cardiac: Synchronized Cardioversion
6. Cardiac: Automated External Defibrillation
7. Cardiac: Manual External Defibrillation
8. Cardiac: Reperfusion Checklist
9. Cardiac: Valsalva Maneuver
10. Cardiac: Induced Hypothermia
1. Venous Access: Blood Draw
2. Venous Access: Central Line Maintenance
3. Venous Access: Extremity
4. Venous Access: Intraosseous
1. Wound Care: General
2. Wound Care: Taser Probe Removal
3. Wound Care: Tourniquet
4. Wound Care: Quick-Clot®
1. Vital Signs: Temperature Measurement
2. Vital Signs: Capnography
3. Vital Signs: Blood Glucose Analysis
4. Vital Signs: Pain Assessment
5. Vital Signs: Orthostatic Blood Pressure
1. Trauma: Spinal Immobilization
2. Trauma: Extremity Splinting
1. Stroke Screen: LAPSS
2. Stroke Screen: CPSS
1. Other: Adult-Pediatric Division
2. Other: Childbirth
3. Other: Decontamination
4. Other: Restraints: Chemical / Physical
5. Other: Subcutaneous / Intramuscular Injection
6. Other: Nasogastric Tube Insertion

Assessment: Adult

Approved for the following license levels:

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P

Protocol Indications:

GO - Patient Contact Decision Tree

Clinical Contraindications:

- None

Procedure:

1. Scene size-up, including universal precautions, scene safety, environmental hazards assessment, need for additional resources, bystander safety, and patient/caregiver interaction
2. Assess need for additional resources.
3. Initial assessment includes a general impression as well as the status of a patient's airway, breathing, and circulation.
4. Assess mental status using AVPU and GCS. Alert and oriented is defined by appropriate answers relating to Person, Place, Time, and Event.
5. Control major hemorrhage and assess overall priority of patient.
6. Perform a focused history and physical based on patient's chief complaint.
7. Assess need for critical interventions.
8. Complete critical interventions and perform a complete secondary exam to include a baseline set of vital signs:
 - Blood pressure
 - SPO2
 - Heart Rate
 - Respiratory Rate
 - Pain level / severityTo include when appropriate:
 - Temperature
 - Blood Glucose
 - ETCO2
9. Maintain an on-going assessment throughout transport; to include patient response / possible complications of interventions, need for additional interventions, and assessment of evolving patient complaints / conditions.
10. Document all findings and information associated with the assessment, performed procedures, and any administration of medications on the EPCR.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Assessment: Pediatric

Approved for the following license levels:

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P

Protocol Indications:

GO - Patient Contact Decision Tree

Clinical Contraindications:

- None

Procedure:

1. Scene size-up, including universal precautions, scene safety, environmental hazards assessment, need for additional resources, bystander safety, and patient/caregiver interaction
2. Assess need for additional resources.
3. Initial assessment includes a general impression as well as the status of a patient's airway, breathing, and circulation.
4. Assess patient using the pediatric triangle of ABCs:
 - a. Airway and appearance: speech/cry, muscle tone, interactivity, look/gaze, movement of extremities
 - b. Work of breathing: absent or abnormal airway sounds, use of accessory muscles, nasal flaring, body positioning
 - c. Circulation to skin: pallor, mottling, cyanosis
5. Assess mental status using AVPU and GCS. Alert and oriented is defined by appropriate answers relating to Person, Place, Time, and Event, or appropriate behavior for age.
6. Control major hemorrhage and assess overall priority of patient.
7. Perform a focused history and physical based on patient's chief complaint.
8. Assess need for critical interventions.
9. Complete critical interventions and perform a complete secondary exam to include a baseline set of vital signs:
 - Blood pressure (BP > 3 years of age, cap refill < 3 years of age)
 - SPO2
 - Heart Rate
 - Respiratory Rate
 - Pain level / severityTo include when appropriate:
 - Temperature
 - Blood Glucose
 - ETCO2
10. Maintain an on-going assessment throughout transport; to include patient response / possible complications of interventions, need for additional interventions, and assessment of evolving patient complaints / conditions.
11. Document all findings and information associated with the assessment, performed procedures, and any administration of medications on the EPCR.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Airway: BIAD (I-Gel)

Approved for the following license levels:

B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P

Protocol Indications:

- A1 - Airway: Adult
- A2 - Airway: Adult, Failed
- A4 - Airway: Pediatric
- A5 - Airway: Pediatric, Failed

Clinical Contraindications:

- Deforming Facial Trauma
- Pulmonary Fibrosis
- Morbid Obesity

Procedure:

1. Lubricate device with a water-soluble jelly.
2. Pre-Oxygenate the patient with 100% Oxygen.
3. Remove the I-Gel from the protective cradle. Grasp the lubricated I-gel along the integral bite block.
4. Position the device so that the I-gel cuff outlet is facing towards the chin of the patient.
5. The chin should be gently pressed down before proceeding.
6. Introduce the leading soft tip into the mouth of the patient in a direction towards the hard palate.
7. Glide the device downwards and backwards along the hard palate with a continuous but gentle push until a definitive resistance is felt.
8. If there is early resistance during insertion a 'jaw thrust' or 'Insertion with Deep Rotation' is recommended.
9. Connect the device to a Bag-Valve-Mask and assess for breath sounds and air entry.
10. Confirm tube placement using end-tidal CO2 detector.
11. Monitor oxygen saturation with pulse oximetry.
12. It is required that the airway be monitored continuously through Capnography and Pulse Oximetry.
13. Re-verify device placement after every move and upon arrival in the ED.
14. Document the procedure, time, and result (success) in the EPCR.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Airway: CPAP (Continuous Positive Airway Pressure)

Approved for the following license levels:

B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P

Protocol Indications:

P1 – Respiratory Distress
T4 - Drowning

Clinical Contraindications:

- Facial injury
- Inability of patient to maintain their own airway
- Suspected pneumothorax

Procedure:

1. Prior to use, be sure the device is free of obstructions and verify proper valve function.
2. Ensure adequate oxygen supply to ventilation device.
3. The **Orange** Trio generator device is supplied in the 30% FiO₂ position. To adjust for different FiO₂ levels, turn the knob until desired level is visible in the window. The printed percentage position must be fully visible in order to achieve the desired level. If not fully visible, approximately 30% will be delivered.
2. Explain the procedure to the patient.
3. Place the delivery mask over the mouth and nose. Oxygen should be flowing through the device at this point.
4. Secure the mask with provided straps until minimal air leak occurs.
6. Evaluate the response of the patient assessing breath sounds, oxygen saturation, and general appearance.
7. Titrate oxygen levels to the patient's response. Many patients respond to low FiO₂ (30-50%).
8. Encourage the patient to allow forced ventilation to occur. Observe closely for signs of complications. The patient must be breathing for optimal use of the CPAP device.
9. Document time and response on patient care report (PCR).
10. This procedure is contraindicated if the patient is incapable of understanding instructions.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Airway: Nebulizer Inhalation Therapy

Approved for the following license levels:

B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P

Protocol Indications:

P1 - Respiratory Distress
Ped8 - Pediatric Cardiac Arrest Critical Thinking

Clinical Contraindications:

- Inability of patient to maintain their own airway

Procedure:

1. Gather the necessary equipment.
2. Assemble the nebulizer kit.
3. Instill the premixed drug (such as Albuterol, Normal Saline or other approved drug) into the reservoir well of the nebulizer.
4. Connect the nebulizer device to oxygen at 6 liters per minute to produce a steady, visible mist.
5. Instruct the patient to inhale normally through the mouthpiece of the nebulizer. The patient needs to have a good lip seal around the mouthpiece.
6. The treatment should last until the solution is depleted. Tapping the reservoir well near the end of the treatment will assist in utilizing all of the solution.
7. Monitor the patient for medication effects. This should include the patient's assessment of his/ her response to the treatment and reassessment of vital signs, ECG, and breath sounds.
8. Document the treatment, dose, and route in the EPCR.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Airway: Suctioning, Basic

Approved for the following license levels:

B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P

Ped1 - Childbirth / Labor

Protocol Indications:

Clinical Contraindications:

- Basic suctioning is limited to the visible airways.

Procedure:

1. Ensure suction device is in proper working order with suction tip in place.
2. Preoxygenate the patient with 100% O₂.
3. Explain the procedure to the patient if they are coherent.
4. Examine the oropharynx and remove any potential foreign bodies or material which may occlude the airway if dislodged by the suction device.
5. If applicable, remove ventilation devices from the airway.
6. Use the suction device to remove any secretions, blood, or other substance.
7. The alert patient may assist with this procedure.
8. Reattach ventilation device (e.g., bag-valve mask) and ventilate or assist the patient.
9. Record the time and result of the suctioning in the EPCR.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Airway: Suctioning, Advanced

Approved for the following license levels:



Ped2 - Newly Born

Protocol Indications:

Clinical Contraindications:

- None

Procedure:

1. Ensure suction device is in proper working order with suction tip in place.
2. Preoxygenate the patient with 100% O₂.
3. Explain the procedure to the patient if they are coherent.
4. Examine the oropharynx and remove any potential foreign bodies or material which may occlude the airway if dislodged by the suction device.
5. If applicable, remove ventilation devices from the airway.
6. Use the suction device to remove any secretions, blood, or other substance.
7. The alert patient may assist with this procedure.
8. Reattach ventilation device (e.g., bag-valve mask) and ventilate or assist the patient.
9. Record the time and result of the suctioning in the EPCR.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Airway: Cricothyrotomy

Approved for the following license levels:

P

EMT-Paramedic

P

Protocol Indications:

A2 - Airway: Adult, Failed
A5 - Airway: Pediatric, Failed

Clinical Contraindications:

- None

Procedure:

1. Have suction and supplies available and ready.
2. Locate the cricothyroid membrane utilizing anatomical landmarks
3. Prepare the area with iodine solution.
4. Using an appropriate needle of equal to or greater than 14 gauge with a 3 cc syringe attached, insert the needle perpendicularly through the cricothyroid membrane.
5. During needle insertion apply gentle aspiration to the syringe. Rapid aspiration of air into the syringe indicates successful entry into the trachea. Advance the needle only the distance necessary to ensure that the bevel is within the trachea. Minimal advancement of the catheter is acceptable, but do not advance the needle farther. Remove the syringe and needle from the catheter. Re-attach the syringe barrel to the catheter **with the plunger and needle removed**.
6. Attach the Bag Valve Mask adapter piece of a 7 mm or 6 mm endotracheal tube to the distal and open barrel of the 3 cc syringe. Attempt to supply oxygen through the syringe-catheter apparatus using Bag Valve Mask. If a reliable oxygen saturation of greater than 90% is attained or if patient is a pediatric based on the Adult-Pediatric Division **Procedure**, stop here and continue to oxygenate the patient.
7. If the patient is a adult based on the Adult-Pediatric Division **Procedure** and the needle jet is insufficient in oxygenating the patient, then with the catheter in place make a one inch vertical incision extending $\frac{1}{2}$ " above and $\frac{1}{2}$ " below the catheter then expose the cricoid membrane
8. Make a small horizontal stabbing incision through the membrane on each side of the catheter. Remove the catheter.
9. Using an endotracheal stylet or gloved finger to maintain the opening, insert an endotracheal tube of sufficient diameter through the incision and direct it caudally down the trachea.
10. Inflate the cuff with 5 - 10 cc of air and ventilate the patient.
11. All standard methods of assessment for tube placement to include ETCO₂ must be used.
12. Secure the tube.
13. Document size of tube, time, success in the EPCR.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Airway: Foreign Body Obstruction

Approved for the following license levels:

B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P

Protocol Indications:

A1 - Airway: Adult
A4 - Airway: Pediatric

Clinical Contraindications:

- None

Procedure:

1. Assess the degree of foreign body obstruction:
 - Do not interfere with a mild obstruction allowing the patient to clear their airway by coughing.
 - In severe foreign-body obstructions, the patient may not be able to make a sound. The victim may clutch his/her neck in the universal choking sign.
2. For an infant, deliver 5 back blows (slaps) followed by 5 chest thrusts repeatedly until the object is expelled or the victim becomes unresponsive.
3. For a child, perform a sub-diaphragmatic abdominal thrust (Heicich Maneuver) until the object is expelled or the victim becomes unresponsive.
4. For adults, a combination of maneuvers may be required.
 - First, sub-diaphragmatic abdominal thrusts (Heicich Maneuver) should be used in rapid sequence until the obstruction is relieved.
 - If abdominal thrusts are ineffective, chest thrusts should be used. Chest thrusts should be used primarily in morbidly obese patients and in the patients who are in the late stages of pregnancy
5. If the victim becomes unresponsive, begin Cardiac: Cardiopulmonary Resuscitation **Procedure** immediately but look in the mouth before administering any ventilations. If a foreign-body is visible, remove it. Consider appropriate Airway **Protocol** or appropriate Failed Airway **Protocol**.
6. Do not perform blind finger sweeps in the mouth and posterior pharynx. This may push the object farther into the airway.
7. In unresponsive patients EMT-Paramedic level professionals should visualize the posterior pharynx with a laryngoscope to potentially identify and remove the foreign-body using Magill forceps.
8. Document the methods used and result of these procedures in the EPCR.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Airway: Intubation, Confirmation

Approved for the following license levels:

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P

Protocol Indications:

- A1 - Airway: Adult
- A2 - Airway: Adult, Failed
- A3 - Airway: Drug Assisted Intubation
- A4 - Airway: Pediatric
- A5 - Airway: Pediatric, Failed

Clinical Contraindications:

- None

Procedure:

1. Obtain appropriate tubing and adapter.
2. Place adapter on advanced airway and monitor value of ETCO₂ for duration of patient care with advanced airway in place.
3. As moisture builds in the tubing, indicated by errant values or failure to operate, it may need to be replaced.
4. Attach the adapter tubing to the monitor and ensure that it is screwed into the adapter.
5. Assess for values greater than 50 mmHg or an increase of 10 mmHg above base line which may correspond to changes in respiratory rate/depth indicating apnea, hypoventilation, or a return of spontaneous circulation.
6. A sudden drop in ETCO₂ greater than 10 mmHg from baseline may indicate hyperventilation, equipment failure, dislodgement of the device, or a loss of spontaneous circulation.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Airway: Intubation, Nasal-Tracheal

Approved for the following license levels:

P

EMT-Paramedic

P

Protocol Indications:

A1 - Airway: Adult
A4 - Airway: Pediatric

Clinical Contraindications:

- Maxillofacial Trauma
- Head Injury
- Apnea

Procedure:

1. Select the largest and least obstructed nostril and insert a lubricated nasal airway to help dilate the nasal passage.
2. Preoxygenate the patient. Lubricate the tube.
3. Remove the nasal airway and gently insert the tube keeping the bevel of the tube toward the septum.
4. Continue to pass the tube listening for air movement and looking for and fro vapor condensation in the tube. As the tube approaches the larynx, the air movement gets louder.
5. Gently and evenly advance the tube through the glottis opening on the inspiration. This facilitates passage of the tube and reduces the incidence of trauma to the vocal cords.
6. Upon entering the trachea, the tube may cause the patient to cough, buck, strain, or gag. Do not remove the tube! This is normal, but be prepared to control the cervical spine and the patient, and be alert for vomiting.
7. Auscultate for bilaterally equal breath sounds and absence of sounds of the epigastrium. Observe for symmetrical chest expansion. The 15mm adapter usually rests close to the nostril with proper positioning.
8. Inflate the cuff with 5 - 10 cc of air.
9. Confirm tube placement using an end-tidal CO2 monitoring.
10. Secure the tube.
11. Reassess airway and breath sounds after transfer to the stretcher and during transport. These tubes are easily dislodged and require close monitoring and frequent reassessment.
12. Document the procedure, time, and result (success) in the EPCR.
13. It is required that the patient be monitored through Continuous Capnography and Pulse Oximetry.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Airway: Intubation, Oral-Tracheal

Approved for the following license levels:

P

EMT-Paramedic

P

Protocol Indications:

A1 - Airway: Adult
A4 - Airway: Pediatric

Clinical Contraindications:

- None

Procedure:

1. Prepare, position and oxygenate the patient with 100% Oxygen.
2. Select proper ET tube (and stylet, if used), have suction ready.
3. Using laryngoscope, visualize vocal cords.
4. Limit each intubation attempt to 30 seconds with Bag Valve Mask between attempts. 10 seconds during CPR.
5. Visualize tube passing through vocal cords.
6. Confirm and document tube placement using an end-tidal CO₂ monitoring.
7. Inflate the cuff with 3 - 10 cc of air; secure the tube to the patient's face.
8. Auscultate for bilaterally equal breath sounds and absence of sounds over the epigastrium. If you are unsure of placement, remove tube and ventilate patient with Bag Valve Mask.
9. Consider using a Blind Insertion Airway Device if intubation efforts are unsuccessful.
10. Apply end tidal carbon dioxide monitor adapter (Capnography) and record readings on scene, enroute to the hospital, and at the hospital.
11. Document ETT size, time, result (success), and placement location by the centimeter marks either at the patient's teeth or lips in the EPCR. Document positive or negative breath sounds before and after each movement of the patient.
12. Consider placing an NG or OG tube to clear stomach contents after the airway is secured with an ET tube.
13. It is required that the airway (if equipment is available) be monitored continuously through Capnography and Pulse Oximetry.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Airway: Intubation, Drug Assisted

Approved for the following license levels:

P

EMT-Paramedic

P

A3 - Airway: Drug Assisted Intubation

Protocol Indications:

Clinical Contraindications:

- Any patient considered Pediatric based on the Adult-Pediatric Division **Procedure**
- Patient or family history of malignant hyperthermia

Procedure:

1. Pre-oxygenate patient with 100% oxygen via NRB mask or Bag Valve Mask.
2. Monitor oxygen saturation with pulse oximetry and heart rhythm with ECG.
3. Ensure functioning IV access.
4. Perform focused neurological exam.
5. Prepare equipment (intubation kit, BVM, suction, medications, BIAD, Cricothyrotomy kit, waveform capnography).
6. Administer Etomidate (0.3 mg/kg MAX DOSE = 20 mg).
7. In-line c-spine stabilization by second caregiver (in setting of trauma).
8. Intubate trachea.
9. Verify ET placement through auscultation, Capnography, and Pulse Oximetry.
10. Secure tube.
11. Continuous Capnography and Pulse Oximetry is required for Drug Assisted Intubation.
12. Document ETT size, time, result (success), and placement location by the centimeter marks either at the patient's teeth or lips in the EPCR. Document positive or negative breath sounds before and after each movement of the patient.
13. Consider subsequent doses of Fentanyl and / or Versed after intubation to facilitate patient compliance and comfort. Etomidate is indicated only for induction and not maintenance of induction.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Airway: Ventilator Operation

Approved for the following license levels:

B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P

A3 - Airway: Drug Assisted Intubation

Protocol Indications:

Clinical Contraindications:

- None

Procedure:

Transfer Patient

1. Transporting personnel should review the operation of the ventilator with the treating personnel (physician, nurse, or respiratory therapy) in the referring facility prior to transport if possible.
2. All ventilator settings, including respiratory rate, FiO₂, mode of ventilation, and tidal volumes should be recorded prior to initiating transport. Additionally, the recent trends in oxygen saturation experienced by the patient should be noted.
3. Prior to transport, specific orders regarding any anticipated changes to ventilator settings as well as causes for significant alarm should be reviewed with the referring medical personnel as well as medical control.
4. Once in the transporting unit, confirm adequate oxygen delivery to the ventilator.
5. Frequently assess breath sounds to assess for possible tube dislodgment during transfer.
6. Frequently assess the patient's respiratory status, noting any decreases in oxygen saturation or changes in tidal volumes, peak pressures, etc.
7. Note any changes in ventilator settings or patient condition in the PCR.
8. Consider placing an NG or OG tube to clear stomach contents.
9. End tidal CO₂ wave form capnography is required.
10. **If any significant change in patient condition, including vital signs or oxygen saturation or there is a concern regarding ventilator performance/ alarms, remove the ventilator from the endotracheal tube and use a Bag Valve Mask with 100% O₂. Contact medical control immediately.**

Acute Patient

1. Ensure all hoses and tubes are free from kinks or breaks.
2. Connect to ventilator device.
3. Turn Device on.
4. Select patient's height and ensure ventilator is operating correctly.
5. Connect to patient via mask, BIAD device or ETT.
6. Attach and record ETCO₂.
7. Record settings.
8. **If any significant change in patient condition, including vital signs or oxygen saturation or there is a concern regarding ventilator performance/ alarms, remove the ventilator from the endotracheal tube and use a Bag Valve Mask with 100% O₂. Contact medical control immediately.**

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Airway: Thoracic Needle Decompression

Approved for the following license levels:



Protocol Indications:

C6 - Cardiac Arrest Critical Thinking
Ped8 - Pediatric Cardiac Arrest Critical Thinking

Clinical Contraindications:

- None

Procedure:

1. Don personal protective equipment (gloves, eye protection, etc.).
2. Identify and prep the site:
 - a. Locate the second intercostal space just lateral to the mid clavicular line on the same side of the suspected pneumothorax often found just inferior to the clavicle.
 - b. Prepare the site with iodine ointment or solution.
3. Insert the catheter of diameter not less than 14 ga in a caudal direction until the pleural cavity has been reached indicated by a rush of air or the hub of the catheter has contacted the skin. Remove the needle from the catheter and leave the catheter in place.
4. Secure the catheter hub to the chest wall with dressings and tape.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Cardiac: 12 Lead ECG

Approved for the following license levels:

B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P

Protocol Indications:

G0 - Patient Contact Decision Tree
C1 - Chest Pain: Cardiac and STEMI

Clinical Contraindications:

- Note: EMT-B can obtain a 12-Lead ECG without rhythm interpretation only!

Procedure:

- Administer oxygen as patient condition warrants.
- If patient is unstable, definitive treatment is the priority. If patient is stable or stabilized after treatment, then perform a 12 Lead ECG.
- Prepare ECG monitor and connect patient cable with electrodes.
- Enter the required patient information (patient name, etc.) into the 12 lead ECG device.
- Expose chest and prep as necessary. Modesty of the patient should be respected.
- Apply chest leads and extremity leads using the following landmarks:
 - RA - Right arm
 - LA - Left arm
 - RL - Right leg
 - LL - Left leg
 - V1 - 4th intercostal space at right sternal border
 - V2 - 4th intercostal space at left sternal border
 - V3 - Directly between V2 and V4
 - V4 - 5th intercostal space at midclavicular line
 - V5 - Level with V4 at left anterior axillary line
 - V6 - Level with V5 at left mid-axillary line
- Instruct patient to remain still.
- Press the appropriate button to acquire the 12 Lead ECG.
- If the monitor detects signal noise (such as patient motion or a disconnected electrode), the
- Lead acquisition will be interrupted until the noise is removed.
- Determine the rhythm present on the EKG
- Determine the presence or absence of ST segment elevation greater than 1 mm in 2 or more contiguous leads.
- Monitor the patient while continuing with the treatment protocol.
- Document the procedure, time, and results in the EPCR and download the data to be included with the EPCR.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Cardiac: External Pacing

Approved for the following license levels:



Protocol Indications:

C3 - Bradycardia
C6 - Cardiac Arrest Critical Thinking
Ped8 - Pediatric Cardiac Arrest Critical Thinking

Clinical Contraindications:

- None

Procedure:

1. Attach standard four-lead monitor.
2. Apply defibrillation/pacing as follows:
 - a. One pad to the RIGHT of the sternum below the clavicle.
 - b. One pad to the left lateral chest at the level of the Xiphoid process.
3. Press pacing button to select pacing option.
4. Adjust heart rate to 80 BPM for an adult and 100 BPM for a child.
5. Note pacer spikes on EKG screen.
6. Increase output until a pulse is detectable, the patient's condition improves, the patient is unwilling or incapable of tolerating pacing or the maximum amperes are being delivered without affect.
7. If unable to capture while at maximum current output, stop pacing immediately.
8. Consider the use of sedation or analgesia if patient is uncomfortable.
10. Document the dysrhythmia and the response to external pacing in the EPCR; download the monitor data to the EPCR.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Cardiac: Cardiopulmonary Resuscitation

Approved for the following license levels:

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P

Protocol Indications:

C5 - Cardiac Arrest
C6 – Cardiac Arrest Critical Thinking
Ped7 - Pediatric Cardiac Arrest
Ped8 - Pediatric Cardiac Arrest Critical Thinking

Clinical Contraindications:

- Responsive patients
- Adult patients with a palpable femoral, carotid, or radial pulse; Pediatric patients with a pulse rate > 60.

Procedure:

1. Determine the patient's level of responsiveness by shouting and gently shaking the patient
2. Determine if the patient has a normal or acceptable pattern and volume of respiration.
3. If the patient is unresponsive to voice and has no normal respirations begin manual continuous chest compressions/**Cardiac: Auto-Pulse Procedure:**
 - a. To a depth of at least 2 inches for adults
 - b. Allow complete chest recoil
 - c. Rotate providers every 2 minutes
4. Expose the patient's chest and attach cardioversion pads. Ensure monitor is set to interpret "Paddles" lead and charge the monitor in preparation for defibrillation.
5. Stop compressions long enough to determine rhythm, defibrillate if needed, and then resume chest compressions.
6. Ensure that the airway does not impede ventilation (consider oral airway).
7. Provide supplemental oxygen.
8. Charge the defibrillator and perform rhythm check.
9. Refer to appropriate protocol.
10. Establish IV access and provide appropriate therapy.
11. Establish advanced airway and provide positive pressure ventilation with ETCO₂ wave form.
12. Ensure that the patient's environment does not impede the ability to provide good care. Move the patient if needed.
13. Document procedure in the EPCR.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Cardiac: Auto-Pulse

Approved for the following license levels:

B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P

C5 - Cardiac Arrest

Protocol Indications:

Clinical Contraindications:

- Responsive patients
- Adult patients with a palpable pulse
- Pediatric patients based on the Adult-Pediatric Division **Procedure**
- Traumatic cardiac arrest patients

Procedure:

1. Determine the patient's level of responsiveness by shouting and gently shaking the patient
2. Determine if the patient has a normal or acceptable pattern and volume of respiration.
3. If the patient is unresponsive to voice and has no normal respirations begin continuous chest compressions
 - a. to a depth of at least 2 inches for adults
 - b. Allow complete chest recoil
 - c. Rotate every 2 minutes
4. Expose the patient's chest and attach cardioversion pads. Ensure monitor is set to interpret "Paddles" lead and charge the monitor in preparation for defibrillation.
5. Stop compressions long enough to determine rhythm, defibrillate if needed, and then resume chest compressions.
6. Ensure that the airway does not impede ventilation (consider oral airway) and provide supplemental oxygen.
7. Deploy the Auto-Pulse
 - a. Remove the device from the bag and place it above the head of the patient oriented in accordance with the diagram on the board d. Lift the life band gently and then separate the band at the Velcro.
 - b. Turn the Auto-Pulse on
 - b. Lift the patient into a sitting position and pull the Auto-Pulse board beneath patient. Gently allow the patient to recline back onto the board.
 - c. Reattach the life band sides such that the yellow bar is centered on the anterior chest.
 - d. Push the green button on the Auto-Pulse twice. Press the center button twice to activate continuous chest compression mode. Press the orange button to pause compressions for defibrillation
 - e. Secure the patient to the board by deploying the Auto-Pulse shoulder straps, c-collar, and tape. f. In the event of a User Advisory red light: lift the life band slowly, reposition the patient's hips, press the green button three times.
 - f. Extend the flexible litter and lift the patient to the cot.
8. Establish IV access and provide appropriate therapy.
9. Establish advanced airway and provide positive pressure ventilation with ETCO₂ wave form.
10. Document procedure in the EPCR.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Cardiac: Synchronized Cardioversion

Approved for the following license levels:



Protocol Indications:

C4 - SVT / Wide Complex Tachycardia
C6 – Cardiac Arrest Critical Thinking
Ped8 - Pediatric Cardiac Arrest Critical Thinking
Ped11 - Pediatric Supraventricular Tachycardia

Clinical Contraindications:

- Patients in cardiac arrest.

Procedure:

1. Ensure the patient is attached properly to a monitor/defibrillator capable of synchronized cardioversion.
2. Have all equipment prepared for unsynchronized cardioversion/defibrillation if the patient fails synchronized cardioversion and the condition worsens.
3. Consider the use of pain or sedating medications.
4. Set energy selection to the appropriate setting.
5. Set monitor/defibrillator to synchronized cardioversion mode.
6. Make certain all personnel are clear of patient.
7. Press and hold the shock button to administer shock. Stay clear of the patient until you are certain the energy has been delivered. NOTE: It may take the monitor / defibrillator several cardiac cycles to “synchronize.” There may be a delay between activating the cardioversion and the actual delivery of energy.
8. Note patient response and perform immediate unsynchronized cardioversion / defibrillation if the patient’s rhythm has deteriorated into Perfusionless ventricular tachycardia / ventricular fibrillation following the procedure for cardioversion.
9. If the patient’s condition is unchanged, repeat steps 2 through 8 above using prescribed escalating doses of energy.
10. Repeat until maximum setting or until efforts succeed. Consider consulting medical control if cardioversion is unsuccessful after 2 attempts
11. Note procedure, response and time in the EPCR.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Cardiac: Automated External Defibrillation

Approved for the following license levels:

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P

Protocol Indications:

C5 - Cardiac Arrest
Ped7 - Pediatric Cardiac Arrest

Clinical Contraindications:

- Pediatric patients who are so small that the pads cannot be placed without touching one another.

Procedure:

1. If multiple rescuers available, one rescuer should provide uninterrupted chest compressions while the AED is being prepared for use.
2. Apply defibrillator pads per manufacturer recommendations. Use alternate placement when implanted devices (pacemakers, AICDs) occupy preferred pad positions.
3. Remove any medication patches on the chest and wipe off any residue.
4. Activate AED for analysis of rhythm.
5. Stop CPR and clear the patient for rhythm analysis. Keep interruption in CPR as brief as possible.
6. Defibrillate if appropriate by depressing the "shock" button. Assertively state "CLEAR" and visualize that no one, including yourself, is in contact with the patient prior to defibrillation.
7. Begin CPR (chest compressions and ventilations) immediately after the delivery of the defibrillation.
8. After 2 minutes of CPR, analyze rhythm and defibrillate if indicated. Repeat this step every 2 minutes.
9. If "no shock advised" appears, perform CPR for two minutes and then reanalyze.
10. Transport and continue treatment as indicated.
11. Keep interruption of CPR compressions as brief as possible. Adequate CPR is a key to successful resuscitation.
12. If pulse returns please use the Post Resuscitation **Protocol**.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Cardiac: Manual External Defibrillation

Approved for the following license levels:



Protocol Indications:

C5 – Cardiac Arrest
Ped7 - Pediatric Cardiac Arrest

Clinical Contraindications:

- Responsive patient

Procedure:

1. Ensure that Chest Compressions are adequate and interrupted only when absolutely necessary.
2. Clinically confirm the diagnosis of cardiac arrest and identify the need for defibrillation.
3. Apply defibrillation pads in accordance with package instructions
4. Set the appropriate energy level.
5. Charge the defibrillator to the selected energy level. Continue chest compressions while the defibrillator is charging.
6. Hold Compressions, assertively state, "CLEAR" and visualize that no one, including yourself, is in contact with the patient.
7. Deliver the shock by depressing the shock button.
8. Immediately resume chest compressions and ventilations for 2 minutes. After 2 minutes of CPR, analyze rhythm and check for pulse only if appropriate for rhythm.
9. Repeat the procedure every two minutes as indicated by patient response and ECG rhythm.
10. Keep interruption of CPR compressions as brief as possible. Adequate CPR is a key to successful resuscitation.
11. If pulses return go to the Post Resuscitation **Protocol**.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Cardiac: Reperfusion Checklist

Approved for the following license levels:

B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P

Protocol Indications:

C1 - Chest Pain: Cardiac and STEMI
 SC3 - EMS Triage and Destination Plan: STEMI

Clinical Contraindications:

- None

Procedure:

1. Follow the appropriate protocol for the patient's complaint to assess and identify an acute condition which could potentially benefit from fibrinolysis. If a positive finding is noted on one of the following assessments, proceed to step 2. Perform a 12-lead ECG to identify an acute ST elevation myocardial infarction (STEMI).
2. Complete the following Reperfusion Checks and document to identify any potential contraindications to fibrinolysis.
 - a. Systolic Blood Pressure greater than 180 mm Hg
 - b. Diastolic Blood Pressure greater than 110 mm Hg
 - c. Right vs. Left Arm Systolic Blood Pressure difference of greater than 15 mm Hg
 - d. History of structural Central Nervous System disease (tumors, masses, hemorrhage, etc.)
 - e. Significant closed head or facial trauma within the previous 3 months
 - f. Recent (within 6 weeks) major trauma, surgery (including laser eye surgery), gastrointestinal bleeding, or severe genital-urinary bleeding
 - g. Bleeding or clotting problem or on blood thinners
 - h. CPR performed greater than 10 minutes
 - i. Currently Pregnant
 - j. Serious Systemic Disease such as advanced/terminal cancer or severe liver or kidney failure.
3. Identify if the patient is currently in heart failure or cardiogenic shock. For these patients, a percutaneous coronary intervention is more effective.
 - a. Presence of pulmonary edema (rales greater than halfway up lung fields)
 - b. Systemic hypo-perfusion (cool and clammy)
4. If any contraindication is noted using the check list and a STEMI is confirmed by ECG, go to the EMS Triage and Destination Plan: STEMI **Protocol** for fibrinolytic ineligible patients. This may require the EMS Agency or Air Medical Service to transport directly to a specialty center capable of interventional care within the therapeutic window of time.
5. Record all findings in the EPCR.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Cardiac: Valsalva Maneuver

Approved for the following license levels:

B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P

C4 - SVT / Wide Complex Tachycardia

Protocol Indications:

Clinical Contraindications:

- Recent core surgery (Chest, abdomen, pelvis)
- Current hernia
- Altered Mental Status
- History of aneurysm

Procedure:

1. Place patient in a sitting or Fowlers position.
2. Begin printing a 4 lead cardiac strip to monitor changes.
3. Have patient take a deep breath.
4. Have *patient* hold their mouth and nose shut.
5. Have patient attempt to breathe out, increasing thoracic pressure to a count of 5 seconds.
6. Have patient relax and breathe normal again. Be aware syncope is a potential side-effect of this procedure. Be prepared to assist ventilations if patients breathing becomes abnormal.
7. Record all findings in the EPCR; attach monitor data to EPCR.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Cardiac: Induced Hypothermia

Approved for the following license levels:

B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P

C9 - Post Resuscitation

Protocol Indications:

Clinical Contraindications:

- Patients deemed responsive using AVPU

Procedure:

1. Using AVPU , determine the post resuscitation patients responsiveness; if unresponsive, continue.
2. Maintain any necessary medical interventions. (i.e. manual ventilation, medication infusions, etc.)
3. Limit patient movement, especially if spinal immobilization is in place.
4. Use basic cooling measures:
 - a. Remove patients clothing and expose maximum skin surface area.
 - b. Increase cool air movement within the ambulance compartment.
 - c. Apply towel-wrapped cool packs to underarms and between thighs if available.
5. Continuously monitor & reassess patient condition. Be prepared to return to Cardiac Arrest **Protocol** if necessary.
6. Notify receiving facility of patient status and that cooling measures were started.
7. Record process, time of application, time of ROSC and any vitals / changes in condition in the EPCR; attach monitor data to EPCR.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Venous Access: Blood Draw

Approved for the following license levels:

A	Advanced EMT	A
P	EMT-Paramedic	P

Protocol Indications:

- Request must be for lawful purposes from a representative of an official agency or organization, with patient or lawful representative authorization, or an agency/individual with the lawful ability to compel a patient to provide a blood sample

Clinical Contraindications:

Procedure:

- Utilize universal precautions as per OSHA.
- Select vein and prep as usual.
- Select appropriate blood-drawing devices.
- Draw appropriate tubes of blood for lab testing.
- Assure that the blood samples are labeled with the correct information (a minimum of the patients name, along with the date and time the sample was collected).
- Deliver the blood tubes to the appropriate individual.

Note:

- If Law Enforcement requests a blood draw on a consenting adult for blood alcohol levels we will draw the blood, generate an EPCR, and the patient will sign a PRC or "refusal of care." This does not incur a charge to the patient or the law enforcement agency.
- If Law Enforcement requests a blood draw on a consenting adult and they refuse to sign the EPCR then the requesting law enforcement officer will sign for the patient as a Guarantor.
- If Law Enforcement requests a blood draw on a patient who is refusing and a valid warrant is provided, the blood will be drawn in accordance with #1 or #2 above. The patient must be sufficiently cooperative for the paramedic to do the blood draw. In the event of a non consenting and combative patient. Patient will be taken to the ED by law enforcement or EMS where additional staff can be called on to safely perform the blood draw.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Venous Access: Central Line Maintenance

Approved for the following license levels:

P EMT-Paramedic **P**

Protocol Indications:

- Transfer of Patients with a Central Line Inserted.

Clinical Contraindications:

- None

Procedure:

1. Prior to transportation, ensure the line is secure.
2. Medications and IV fluids may be administered through a central venous pressure line. Such infusions must be held while the central venous pressure is transduced to obtain a central venous pressure, but may be restarted afterwards.
3. Do not manipulate the central venous catheter.
4. If the central venous catheter becomes dysfunctional, does not allow drug administration, or becomes dislodged, contact medical control.
5. Document the time of any pressure measurements, the pressure obtained, and any medication administration in the EPCR.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Venous Access: Extremity

Approved for the following license levels:

A	Advanced EMT	A
P	EMT-Paramedic	P

G1 - Venous Access / Hypotension

Protocol Indications:

Clinical Contraindications:

- Patients where IV medication delivery is not needed or expected.

Procedure:

1. Saline locks may be used as an alternative to an IV tubing and IV fluid in every protocol at the discretion of the ALS professional.
2. Intraosseous access can be used where a threat to life exists as provided for in the Venous Access: Intraosseous **Procedure**.
3. Use the largest catheter bore necessary based upon the patient's condition and size of veins.
4. Fluid and setup choice is preferably:
 - a. Normal Saline with a macro drip (10 gtt/cc) for medical conditions, and
 - b. Normal Saline with a micro drip (60 gtt/cc) for medication infusions.
5. Place a tourniquet around the patient's extremity to restrict venous flow only.
7. Select a vein and an appropriate gauge catheter for the vein and the patient's condition.
8. Prep the skin with an antiseptic solution.
9. Insert the needle with the bevel up into the skin in a steady, deliberate motion until the bloody flashback is visualized in the catheter.
10. Advance the catheter into the vein. Never reinsert the needle through the catheter. Dispose of the needle into the proper container without recapping.
11. Remove the tourniquet and connect the IV tubing or saline lock.
12. Cover the site with a sterile dressing and secure the IV and any tubing.
13. Document the procedure, time and result (success) in the EPCR.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Venous Access: Intraosseous

Approved for the following license levels:

P

EMT-Paramedic

P

G1 - Venous Access / Hypotension

Protocol Indications:

Clinical Contraindications:

- Patients where IV medication delivery is not needed or expected.
- Patients where Venous Access: Extremity **Procedure** would be more appropriate

Procedure:

1. Don personal protective equipment (gloves, eye protection, etc.).
2. Identify anteromedial aspect of the proximal tibia (bony prominence below the knee cap). The insertion location will be 1 - 2 cm (2 finger widths) below this. An alternative site is the anterior aspect of the right proximal humerus. Prep the site recommended by the device manufacturer with iodine solution.
3. For manual pediatric devices, hold the intraosseous needle at a 60 to 90 degree angle, aimed
 - a. away from the nearby joint and epiphyseal plate, twist the needle handle with a rotating
 - b. grinding motion applying controlled downward force until a "pop" or "give" is felt indicating loss of resistance. Do not advance the needle any further.
4. For the EZ-IO intraosseous device, hold the intraosseous needle at a 60° to 90° angle, aimed away from the nearby joint and epiphyseal plate, power the driver until a "pop" or "give" is felt indicating loss of resistance. Do not advance the needle any further.
5. Remove the stylet and place in an approved sharps container.
6. Attach a syringe filled with at least 5 cc Normal Saline; aspirate bone marrow for manual devices only, to verify placement; then inject at least 5 cc of Normal Saline to clear the lumen of the needle. Consider flushing with 1 - 2 cc of Lidocaine.
7. Attach the IV line and adjust flow rate. A pressure bag may assist with achieving desired flows.
8. Stabilize and secure the needle with dressings and tape.
9. You may administer 10 - 20 mg (1 - 2 cc) Lidocaine in adult patients who experience infusion-related pain.
10. Following the administration of any IO medications, flush the IO line with 10 cc of IV fluid.
11. Document the procedure, time, and result (success) in the EPCR.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Wound Care: General

Approved for the following license levels:

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P

Protocol Indications:

G7 - Bleeding Control
T7 - Extremity Trauma

Clinical Contraindications:

- None

Procedure:

1. Use personal protective equipment, including gloves, gown, and mask as indicated.
2. If active bleeding hold direct pressure. Do not rely on "compression" bandage to control bleeding. Direct pressure is much more effective. See Bleeding Control **Protocol**.
3. If hemorrhage can not be controlled by direct pressure and is life threatening then consider Wound Care: Tourniquet **Procedure**.
4. If amputation Clean amputated part Wrap part in sterile dressing soaked in normal saline and place in air tight container. Place container on ice if available.
5. For bites with teeth, irrigate the area with normal saline to clean the wound and wrap with a dry sterile dressing. Make note of distal pulse, motor, and sensory function, rapid transport if distal limb is not perfusing.
6. For dental injuries, attempt to collect avulsed teeth or fragments and avoid contact with tooth root. Submerge teeth in normal saline and transport with patient. Control bleeding by having patient bite gently on a towel / washcloth damp with normal saline and keep patient leaning forward to reduce blood in their airway. If bleeding is serious, be prepared to use Airway: Suctioning, Basic or Advanced **Procedure**.
7. Once bleeding is controlled, irrigate contaminated wounds with saline as appropriate (this may have to be avoided if bleeding was difficult to control). Consider analgesia per protocol prior to irrigation.
8. Cover wounds with sterile gauze/dressings. Check distal pulses, sensation, and motor function to ensure the bandage is not too tight.
9. Monitor wounds and/or dressings throughout transport for bleeding.
10. Document the wound, assessment, treatments and results in the EPCR.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Wound Care: Taser® Probe Removal

Approved for the following license levels:

B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P

G5 - Police Custody

Protocol Indications:

Clinical Contraindications:

- Patients with conducted electrical weapon (Taser®) probe penetration in vulnerable areas of body as mentioned below should be transported for further evaluation and probe removal
- Probes embedded in skin above level of clavicles, female breasts, or genitalia
- Suspicion that probe might be embedded in bone, blood vessel, or other sensitive structure.

Procedure:

1. Ensure wires are disconnected from weapon.
2. Stabilize skin around probe using non-dominant hand.
3. Grasp probe by metal body using dominant hand.
4. Remove probe in single quick motion.
5. Wipe wound with antiseptic wipe and apply dressing.
6. Use Bleeding Control **Protocol** as needed.
7. Document the procedure, location of probes, and results in EPCR.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Wound Care: Tourniquet

Approved for the following license levels:

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P

G7 - Bleeding Control

Protocol Indications:

Clinical Contraindications:

- Non-extremity hemorrhage
- Proximal extremity location where tourniquet application is not practical

Procedure:

1. Place tourniquet proximal to wound on long bone extremity segment.
2. Tighten per manufacturer instructions until hemorrhage stops and/or distal pulses in affected extremity disappear.
3. Secure tourniquet per manufacturer instructions
4. Dress wounds per Wound Care: General **Procedure**.
5. Make note on tape, clothing, or other conspicuous surface that will stay with the patient of the application time.
6. Document application time and results in the EPCR.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Wound Care: Quick-Clot®

Approved for the following license levels:

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P

G7 - Bleeding Control

Protocol Indications:

Clinical Contraindications:

- Wounds with grey matter involvement.
- Wounds where Quick-Clot dressings would occlude patient's airway

Procedure:

1. Identify source of bleed in wound if possible.
2. Unravel Quick-Clot and begin to quickly pack the dressing a little at a time while attempting to direct dressing and pressure to the source of the bleed.
3. Pack wound with as much dressing as possible to increase pressure and allow dressing medication involvement.
4. Hold strong pressure to packed wound for 3 minutes to best ensure clotting.
5. Dress wounds per Wound Care: General **Procedure**.
6. Make note on tape, clothing, or other conspicuous surface that will stay with the patient of the application time.
7. Document application time and results in the EPCR.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Vital Signs: Temperature Measurement

Approved for the following license levels:

B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P

Protocol Indications:

G0 - Patient Contact Decision Tree
Ped10 - Pediatric Seizure
T5 - Hyperthermia

Clinical Contraindications:

- None

Procedure:

1. If clinically appropriate, allow the patient to reach equilibrium with the surrounding environment.
2. For adult patients that are conscious, cooperative, and in no respiratory distress, an oral temperature is preferred (steps 3 to 5 below). For infants or adults that do not meet the criteria above, a rectal temperature is preferred (steps 6 to 8 below).
3. To obtain an oral temperature, ensure the patient has no significant oral trauma and place the thermometer under the patient's tongue with appropriate sterile covering.
4. Have the patient seal their mouth closed around thermometer.
5. If using an electric thermometer, leave the device in place until there is indication an accurate temperature has been recorded (per the "beep" or other indicator specific to the device). If using a traditional thermometer, leave it in place until there is no change in the reading for at least 30 seconds (usually 2 to 3 minutes). Proceed to step 9.
6. Prior to obtaining a rectal temperature, assess whether the patient has suffered any rectal trauma by history and/or brief examination as appropriate for patient's complaint.
7. To obtain a rectal temperature, cover the thermometer with an appropriate sterile cover, apply lubricant, and insert into rectum no more than 1 to 2 cm beyond the external anal sphincter.
8. Follow guidelines in step 5 above to obtain temperature.
9. Record time, temperature, method (oral, rectal), and scale (C° or F°) in EPCR.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Vital Signs: Capnography

Approved for the following license levels:

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P

Protocol Indications:

- A1 - Airway: Adult
- A2 - Airway: Adult, Failed
- A4 - Airway: Pediatric
- A5 - Airway: Pediatric, Failed

Clinical Contraindications:

- EMT-Basic and Below can assist with Capnography sensor setup only!

Procedure:

1. Attach capnography sensor to the BIAD, endotracheal tube, or oxygen delivery device.
2. Note CO₂ level and waveform changes. These will be documented on each respiratory failure, cardiac arrest, or respiratory distress patient.
3. The capnometer shall remain in place with the airway and be monitored throughout the prehospital care and transport.
4. A loss of CO₂ detection or waveform may indicate mechanical dysfunction or a deterioration in the status of the patient which must be addressed.
5. End tidal CO₂ does not necessarily correspond to blood CO₂ levels. Use of capnography on patients who are not intubated can be used as an adjunct in the detection of respiratory depression.
6. Document Capnography levels appropriately in EPCR.
7. In most patients, normal ETCO₂ values should remain between 35-45, cardiac arrest patients with adequate CPR will likely maintain a value > 15, ROSC in a cardiac arrest patient can typically be recognized as ETCO₂ values > 39, if head injury is suspected a target range should be ETCO₂ values between 30-35.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Vital Signs: Blood Glucose Analysis

Approved for the following license levels:

B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P

Protocol Indications:

G0 - Patient Contact Decision Tree
C6 - Cardiac Arrest Critical Thinking
Ped8 - Pediatric Cardiac Arrest Critical Thinking
M2 - Altered Mental Status

Clinical Contraindications:

- None

Procedure:

1. Gather and prepare equipment.
2. Blood samples for performing glucose analysis can be obtained through a finger-stick or when possible simultaneously with intravenous access.
3. Place correct amount of blood on reagent strip or site on glucometer per the manufacturer's instructions.
4. Time the analysis as instructed by the manufacturer.
5. Document the glucometer reading and treat the patient as indicated by the analysis and protocol.
6. Repeat glucose analysis as indicated for reassessment after treatment and as per protocol.
7. Perform Quality Assurance on glucometers every day if any clinically suspicious readings are noted, and/or as recommended by the manufacturer and document in the log.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Vital Signs: Pain Assessment

Approved for the following license levels:

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P

G0 - Patient Contact Decision Tree

Protocol Indications:

Clinical Contraindications:

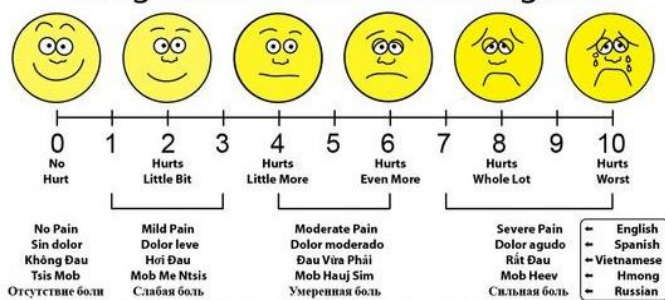
- None

Procedure:

1. Initial and ongoing assessment of pain intensity and character is accomplished through the patient's self report.
2. Pain should be assessed and documented in the PCR during initial assessment, before starting pain control treatment, and with each set of vitals.
3. Pain should be assessed using the appropriate approved scale.
4. Three pain scales are available:
 - The 0 - 10 Scale: the most familiar scale used by EMS for rating pain with patients. It is primarily for adults and is based on the patient being able to express their perception of the pain as related to numbers. Avoid coaching the patient; simply ask them to rate their pain on a scale from 0 to 10, where 0 is no pain at all and 10 is the worst pain ever.
 - Wong - Baker "faces": this scale is primarily for use with pediatrics but may also be used with geriatrics or any patient with a language barrier. The faces correspond to numeric values from 0-10.
 - FLACC Scale: this scale has been validated for measuring pain in children with mild to severe cognitive impairment and in preverbal children (including infants).

FLACC scale

Wong-Baker FACES Pain Rating Scale



Behavioral Observation Pain Rating Scale

Categories	Scoring		
	0	1	2
Face	No particular expression or smile; disinterested	Occasional grimace or frown, withdrawn	Frequent to constant frown, clenched jaw, quivering chin
Legs	No position or relaxed	Uneasy, restless, tense	Kicking, or legs drawn up
Activity	Lying quietly, normal position, moves easily	Squirming, shifting back and forth, tense	Arched, rigid, or jerking
Cry	No crying (awake or asleep)	Moans or whimpers, occasional complaint	Crying steadily, screams or sobs, frequent complaints
Consolability	Content, relaxed	Reassured by occasional touching, hugging, or talking to. Distractable	Difficult to console or comfort

Each of the five categories (F) Face; (L) Legs; (A) Activity; (C) Cry; (C) Consolability is scored from 0-2, which results in a total score between 0 and 10.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Vital Signs: Orthostatic Blood Pressure

Approved for the following license levels:

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P

Protocol Indications:

G1 - Venous Access / Hypotension

Clinical Contraindications:

- None

Procedure:

1. Gather and prepare standard sphygmomanometer and stethoscope.
2. With the patient supine, obtain pulse and blood pressure.
3. Have the patient sit upright.
4. After 30 seconds, obtain blood pressure and pulse.
5. If the systolic blood pressure falls more than 20 mmHg or the pulse rises more than 20 bpm, the patient is considered to be orthostatic.
6. If a patient experiences dizziness upon sitting or is obviously dehydrated based on history or physical exam, formal orthostatic examination should be omitted and fluid resuscitation initiated.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Trauma: Spinal Immobilization

Approved for the following license levels:

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P

G3 - Spinal Immobilization Clearance
Ped5 - Pediatric Head Trauma
Ped6 - Pediatric Multiple Trauma
M1 - Abdominal / Back Pain & Nausea
M2 - Altered Mental Status
T4 - Drowning
T8 - Head Trauma
T9 - Multiple / Core Trauma

Protocol Indications:

Clinical Contraindications:

- None

Procedure:

1. Gather a backboard, straps, C-collar appropriate for patient's size, tape, and device to secure the head.
2. Explain the procedure to the patient
3. Place the patient in an appropriately sized C-collar while maintaining inline stabilization of the C-spine. This stabilization, to be provided by a second rescuer, should not involve traction or tension but rather simply maintaining the head in a neutral midline position while the first rescuer applied the collar.
4. Once the collar is secure, the second rescuer should still maintain their position to ensure stabilization (the collar is helpful but will not do the job by itself.)
5. Place the patient on a long spine board with the log-roll technique if the patient is supine or prone. For the patient in a vehicle or otherwise unable to be placed prone or supine, place them on a backboard by the safest method available that allows maintenance of in-line spinal stability.
6. Stabilize the patient with straps and head rolls/tape or other similar device.
7. Secure the head last. Once the head is secured to the backboard, the second rescuer may release manual in-line stabilization.
8. NOTE: Some patients, due to size or age, will not be able to be immobilized through in-line stabilization with standard backboards and C-collars. Never force a patient into a non-neutral position to immobilize them. Such situations may require a second rescuer to maintain manual stabilization throughout the transport to the hospital. Long boards are NOT required to immobilize a patients spine.
9. Document the time of the procedure in the EPCR.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Trauma: Extremity Splinting

Approved for the following license levels:

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P

Protocol Indications:

Ped6 - Pediatric Multiple Trauma
T1 - Bite / Envenomation
T7 - Extremity Trauma
T9 - Multiple / Core Trauma

Clinical Contraindications:

- None

Procedure:

1. Assess and document pulses, sensation, and motor function prior to placement of the splint. If no pulses are present and a fracture is suspected, consider reduction of the fracture prior to placement of the splint.
2. Remove all clothing from the extremity.
3. Select a site to secure the splint both proximal and distal to the area of suspected injury, or the area where the medical device will be placed.
4. Do not secure the splint directly over the injury or device.
5. Place the splint and secure with Velcro, straps, or bandage material (e.g., kling, kerlex, cloth bandage, etc.) depending on the splint manufacturer and design.
6. Document pulses, sensation, and motor function after placement of the splint. If there has been a deterioration in any of these 3 parameters, remove the splint and reassess.
7. If a femur fracture is suspected and there is no evidence of pelvic fracture or instability, a KTD or other traction splint may be used per training and manufacturer's recommendations.
8. Document the time, type of splint, and the pre and post assessment of pulse, sensation, and motor function in the patient care report (PCR).

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Stroke Screen: R.A.C.E.

Approved for the following license levels:

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P

Protocol Indications:

M5 - Suspected Stroke

Clinical Contraindications:

- None

Procedure:

Item	Instruction	Result	Score	NIHSS Equivalent
Facial Palsy	Ask patient to show their teeth (smile) <small>Sheet 1</small>	Absent (symmetrical movement)	0	0-3
		Mild (slight asymmetrical)	1	
		Moderate to Severe (completely asymmetrical)	2	
Arm Motor Function	Extending the arm of the patient 90° (if sitting) or 45° (if supine)	Normal to Mild (limb upheld more than 10 seconds)	0	0-4
		Moderate (limb upheld less than 10 seconds)	1	
		Severe (patient unable to raise arm against gravity)	2	
Leg Motor Function	Extending the leg of the patient 30° (in supine)	Normal to Mild (limb upheld more than 5 seconds)	0	0-4
		Moderate (limb upheld less than 5 seconds)	1	
		Severe (patient unable to raise leg against gravity)	2	
Head & Gaze Deviation	Observe eyes and head deviation to one side	Absent (eye movements to both sides were possible and no head deviation was observed)	0	0-2
		Present (eyes and head deviation to one side was observed)	1	
Aphasia (R Side)	Difficulty understanding spoken or written words. Ask patient to follow two simple commands: 1. Close your eyes. 2. Make a fist.	Normal (performs both tasks requested correctly)	0	0-2
		Moderate (performs only 1 of 2 tasks requested correctly)	1	
		Severe (Cannot perform either task requested correctly)	2	
Aphasia (L Side)	Inability to recognize familiar objects. Ask patient: 1. "Whose arm is this?" (while showing the affected arm) 2. "Can you move your arm?"	Normal (recognizes arm, and attempts to move arm)	0	0-2
		Moderate (does not recognize arm or is unaware of arm)	1	
		Severe (does not recognize arm and is unaware of arm)	2	

1. Obtain a score based on the above criteria.
2. Establish a time of patient's "Last Known Well".
3. If score is greater than or equal to 4 the likelihood of a Large Vessel Occlusion is significant and a code "STROKE" should be called to the receiving facility.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Other: Adult-Pediatric Division

Approved for the following license levels:

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P

Protocol Indications:

G0 - Patient Contact Decision Tree
C5 - Cardiac Arrest
M2 - Altered Mental Status

Clinical Contraindications:

- None

Procedure:

1. Identify patients age if possible. If patient is under the age of 18, continue.
2. Answer the following questions utilizing pediatric weight-based tape or other tools as necessary and available:
 - a. Is the patient under the age of 13 years?
 - b. Does the patient weigh less than 60 kg / 130 lbs.?
 - c. Is patient shorter than 163 cm / 64 in / 5 ft. 4 in.?
3. If any of the above questions can be answered "Yes" then the patient is considered a Pediatric patient.
4. Follow protocols consistent with the result of this procedure.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Other: Childbirth

Approved for the following license levels:

B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P

Ped1 - Childbirth / Labor

Protocol Indications:

Clinical Contraindications:

- Presentation of a non deliverable child i.e., limb presentation, prolapsed cord unable to remove from child's neck, etc.

Procedure:

1. Support the infants head with a clean towel and an gloved hand to allow a slow and controlled delivery .
2. Sliding a gloved finger along the infant's neck check to ensure the umbilical cord is free. If the umbilical cord has one or more wraps around the infant's neck attempt to pull the wraps over the head. If the cord is wrapped too tightly strongly consider contacting medical control and/or tocolysis with albuterol, terbutaline, and magnesium sulfate. If this is not an option and the life of the infant is in jeopardy clamp the cord in two places and cut the cord between the clamps. The infant must now be delivered emergently.
3. Gently guide the delivery of the anterior shoulder.
4. Gently pull up on the head to allow delivery of the posterior shoulder.
5. Slowly deliver the remainder of the infant.
6. Ensure the infant's airway is clear of obstruction and that ventilator effort is sufficient.
7. Clamp the cord 2 inches from the abdomen with 2 clamps and cut the cord between the clamps.
8. Record APGAR scores at 1 and 5 minutes.
9. Follow the Newly Born Protocol for further treatment.
10. The placenta will deliver spontaneously, usually within 5 minutes of the infant. Do not force the placenta to deliver.
11. Massaging the uterus may facilitate delivery of the placenta and decrease bleeding by facilitating uterine contractions.
12. Continue rapid transport to the hospital.
13. Document infant as a separate patient with a separate EPCR.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Other: Decontamination

Approved for the following license levels:

EMR	Emergency Medical Responder	EMR
B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P

Protocol Indications:

- Use PRN as needed.

Clinical Contraindications:

- None

Procedure:

1. In coordination with Hazardous Material and other Emergency Management personnel, establish hot, warm and cold zones of operation.
2. Ensure that personnel assigned to operate within each zone have proper personal protective equipment.
3. In accordance with other public safety procedures ensure each patient from the hot zone undergoes appropriate initial decontamination.
4. Assist in the evaluation and treatment of patients prior to final decontamination and in accordance with line 2.
5. Assist in the final decontamination of patients in accordance with line 2.
6. Place triage identification on each patient. Match triage information with each patient's personal belongings which were removed during technical decontamination. Preserve these personal effects for law enforcement.
7. Monitor all patients for environmental illness.
8. Transport patients per protocol.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Other: Restraints, Chemical / Physical

Approved for the following license levels:

B	EMT-Basic	B
A	Advanced EMT	A
P	EMT-Paramedic	P

Protocol Indications:

G4 - Behavioral
A3 - Airway: Drug Assisted Intubation
M2 - Altered Mental Status
M3 - Overdose / Toxic Ingestion

Clinical Contraindications:

- Avoid placing yourself or others in harms way, personal safety and crew safety is paramount. Utilize Police when available.
- NOTE: Advanced EMT and below can administer physical restraints only!

Procedure:

EMERGENCY PATIENT:

1. Attempt less restrictive means of managing the patient.
2. Consider requesting law enforcement assistance and/or Medical Control.
3. Ensure that there are sufficient personnel available to physically restrain the patient safely.
4. Restrain the patient in a lateral or supine position using soft restraints. A soft restraint is ANY device that sufficiently restricts patient mobility to ensure patient and staff safety and if needed can be removed quickly and easily by pre-hospital staff. No devices such as backboards, splints, or other devices will be on top of the patient. The patient will never be restrained in the prone position.
5. The patient must be under constant observation by the EMS crew at all times. Patients to whom chemical/physical restraint or sedation has been administered by EMS personnel must also receive continuous cardiac monitoring by ALS staff whenever possible.
6. Extremities that are restrained will have a circulation check at least every 15 minutes. The first of these checks should occur as soon after placement of the restraints as possible. This MUST be documented on the EPCR.
7. Documentation in the EPCR should include:
 - a. the reason for the use of restraints
 - b. the type of restraints used, and the time restraints were placed
 - c. If the above actions are unsuccessful, or if the patient is resisting the restraints, consider administering medications per Behavioral **Protocol**.
(Chemical restraint may be considered earlier in this procedure)
8. If a patient is restrained by law enforcement personnel with handcuffs or other devices EMS personnel can not remove, a law enforcement officer must accompany the patient to the hospital inside the transporting EMS vehicle, if officers are unavailable or unwilling to accompany the patient to the hospital inside the transporting EMS vehicle then patient is to be secured to the stretcher with soft restraints to enable EMS personnel removal in the event of a life threatening emergency. A soft restraint is ANY device that sufficiently restricts patient mobility to ensure patient and staff safety and if needed can be removed quickly and easily by pre-hospital staff. No devices such as backboards, splints, or other devices will be on top of the patient. The patient will never be restrained in the prone position.
9. Per medical direction, no patient who is being transported while in "police custody" can be released by pre-hospital staff.

NON EMERGENCY PATIENT:

1. Patients must have cardiac and pulse oximetry monitoring throughout transport if:
 - a. The patient has been medicated by a PRN medication for uncooperative behavior within 30 minutes of EMS arrival for transport.
 - b. Patient is currently physically or chemically restrained.
 - c. Attending / sending physician orders chemical or physical restraints for transport.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Other: Subcutaneous / Intramuscular Injection

Approved for the following license levels:

A	Advanced EMT	A
P	EMT-Paramedic	P

Protocol Indications:

- Indicated on a Medication by Medication basis, see Medications Section.

Clinical Contraindications:

- None

Procedure:

- Receive and confirm medication order or perform according to standing orders.
- Prepare equipment and medication expelling air from the syringe.
- Explain the procedure to the patient and reconfirm patient allergies.
- The most common site for subcutaneous injection is the arm.
 - Injection volume should not exceed 1 cc.
- The possible injection sites for intramuscular injections include the arm, buttock and thigh.
 - Injection volume should not exceed 1 cc for the arm
 - Injection volume should not exceed 2 cc in the thigh or buttock.
- The thigh should be used for injections in pediatric patients and injection volume should not exceed 1 cc.
- Expose the selected area and cleanse the injection site with alcohol.
- Insert the needle into the skin with a smooth, steady motion SQ: 45-degree angle skin flattened, IM: 90-degree angle skin pinched
- Aspirate for blood.
- Inject the medication.
- Withdraw the needle quickly and dispose of properly without recapping.
- Apply pressure to the site.
- Monitor the patient for the desired therapeutic effects as well as any possible side effects.
- Document the medication, dose, route, and time in the EPCR.

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Nasogastric Tube Insertion

Approved for the following license levels:

P EMT-Paramedic **P**

Protocol Indications:

Clinical Contraindications:

- Severe facial trauma

Procedure:

1. Assemble all needed equipment
2. Don PPEs
3. Explain procedure to patient if conscious
4. If possible sit patient in upright position for optimal alignment
5. Examine nostrils for any trauma or obstructions
6. Measure tubing from bridge of nose to earlobe, then point halfway between the ziphoid process and the navel
7. Mark the measured distance
8. Lubricate 2-4 inches of the tube

Certification Requirements

- Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure.

Standards Policies

1. Air Transport
2. Child Abuse Recognition & Reporting
3. Criteria for Death / Withholding Resuscitation
4. Deceased Subjects
5. Discontinuation of Prehospital Resuscitation
6. Patient Refusal of Care
7. Out of Hospital Do Not Resuscitation
8. Documentation of Vital Signs
9. Physician on Scene
10. Patient Transport
- 11A. Multiple Casualty Event
- 11B. Multiple Casualty Event Diagram
12. 5 Rights of Drug Administration
13. Non-Transport Intravenous Access
14. BLS Skills Procedures
15. Medication Monthly Expiration and Replenishment
16. Mental Health Transport
- 17A. Pediatric Safety Restraint
- 17B. Pediatric Safety Restraint Diagram
18. Domestic Violence
19. Transportation Under Duress
20. Transfer of Patient Care

Air Transport

Policy:

Air transport should be utilized whenever patient care can be improved by decreasing transport time or by giving advanced care not available from ground EMS services, but available from air medical transport services (i.e. blood).

Purpose:

- Improve patient care in the prehospital setting.
- Allow for expedient transport in serious, mass casualty settings.
- Provide life-saving treatment such as blood transfusion.
- Provide more timely access to interventional care in acute Stroke and ST-elevation myocardial infarction (STEMI) patients

Procedure:

Patient transportation via ground ambulance will not be delayed to wait for helicopter transportation .

- If the patient is packaged and ready for transport and the helicopter is not on the ground, or within a reasonable distance, the transportation will be initiated by ground ambulance.

Air transport should be considered if any of the following criteria apply:

- High priority patient with > 20 minute transport time
- Entrapped patients with > 10 minute estimated extrication time
- Multiple casualty incident with red/yellow tag patients
- Multi-trauma or medical patient requiring life-saving treatment not available in prehospital environment (i.e., blood transfusion, invasive procedure, operative intervention)
- Time dependent medical conditions such as acute ST-elevation myocardial infarctions (STEMI) or acute Stroke that could benefit from the resources at a specialty center as per the EMS
- System's Stroke and STEMI Plans.

If a potential need for air transport is anticipated, but not yet confirmed, an air medical transport service can be placed on standby. If the scene conditions or patient situation improves after activation of the air medical transport service and air transport is determined not to be necessary, paramedic or administrative personnel may cancel the request for air transport.

Information which should be provided to the air medical transport service will include at a minimum :

- Number of patients
- Age of patients
- Sex of patients
- Mechanism of injury or complaint (MVC, fall, etc)
- Current vital signs

Child Abuse Recognition & Reporting

Policy:

Child abuse is the physical and mental injury, sexual abuse, negligent treatment, or maltreatment of a child under the age of 18 by a person who is responsible for the child's welfare. The recognition of abuse and the proper reporting is a critical step to improving the safety of children and preventing child abuse.

Purpose:

Assessment of a child abuse case based upon the following principles:

- Protect the life of the child from harm, as well as that of the EMS team from liability.
- Suspect that the child may be a victim of abuse, especially if the injury/illness is not consistent with the reported history.
- Respect the privacy of the child and family.
- Collect as much evidence as possible, especially information.

Procedure:

1. With all children, assess for and document psychological characteristics of abuse, including excessively passivity, compliant or fearful behavior, excessive aggression, violent tendencies, excessive crying, fussy behavior, hyperactivity, or other behavioral disorders
2. With all children, assess for and document physical signs of abuse, including especially any injuries that are inconsistent with the reported mechanism of injury.
3. With all children, assess for and document signs and symptoms of neglect, including inappropriate level of clothing for weather, inadequate hygiene, absence of attentive caregiver(s), or physical signs of malnutrition.
4. Immediately report any suspicious findings to both the receiving hospital (if transported) and to agency responsible for Social Services in the county. After office hours, the child protective services worker on call can be contacted by the EMS System's 911 communications center. While law enforcement may also be notified, Missouri law requires the EMS provider to report the suspicion of abuse to DFS. EMS should not accuse or challenge the suspected abuser. This is a legal requirement to report, not an accusation. In the event of a child fatality, law enforcement must also be notified.

Criteria for Death / Withholding Resuscitation

Policy:

CPR and ALS treatment are to be withheld only if the patient is obviously dead or a valid Missouri Do Not Attempt Resuscitation Order is present.

Purpose:

The purpose of this policy is to:
Honor those who have obviously expired prior to EMS arrival.

Procedure:

1. If a patient is in complete cardiopulmonary arrest (clinically dead) and meets one or more of the criteria below, CPR and ALS therapy need not be initiated:
 - Body decomposition
 - Rigor mortis
 - Dependent lividity
 - Injury not compatible with life (i.e., decapitation, burned beyond recognition, massive open or penetrating trauma to the head or chest with obvious organ destruction)
 - Extended downtime with Asystole on the ECG in two leads.
 - If a bystander or first responder has initiated CPR or automated defibrillation prior to an EMS paramedic's arrival and any of the above criteria (signs of obvious death) are present, the provider may discontinue CPR and ALS therapy.
 - All EMS personnel levels must communicate with medical control prior to discontinuation of the resuscitative efforts.
 - If doubt exists, start resuscitation immediately. Once resuscitation is initiated, continue resuscitation efforts until either:
 - a) Resuscitation efforts meet the criteria for implementing the Discontinuation of Prehospital Resuscitation Policy (see separate policy)
 - b) Patient care responsibilities are transferred to the destination hospital staff.

Deceased Subjects

Policy:

EMS will handle the disposition of deceased subjects in a uniform, professional, and timely manner.

Purpose:

The purpose of this policy is to:

- Organize and provide for a timely disposition of any deceased subject
- Maintain respect for the deceased and family
- Allow EMS to return to service in a timely manner.

Procedure:

1. Do not remove lines or tubes from unsuccessful cardiac arrests/codes unless directed below.
2. Notify the law enforcement agency with jurisdiction if applicable.
3. If subject was found deceased by EMS, the scene is turned over to law enforcement.
4. If EMS has attempted to resuscitate the patient and then terminated the resuscitative efforts, the EMS personnel should contact the medical examiner to provide information about the resuscitative efforts.
5. Transport arrangements should be made in concert with law enforcement and the family's wishes.
6. If the deceased subject's destination is other than the county morgue, any line(s) or tube(s) placed by EMS should be removed prior to transport.
7. Document the situation, name of Physician or Medical Examiner contacted, the agency providing transport of the deceased subject, and the destination in the EPCR.
8. Documentation and EPCR should be completed by the highest licensed individual on scene.

Discontinuation of Prehospital Resuscitation

Policy:

Unsuccessful cardiopulmonary resuscitation (CPR) and other advanced life support (ALS) interventions may be discontinued prior to transport or arrival at the hospital when this procedure is followed.

Purpose:

The purpose of this policy is to:

- Allow for discontinuation of prehospital resuscitation after the delivery of adequate and appropriate ALS therapy.

Procedure:

1. Discontinuation of CPR and ALS intervention may be implemented via contact with Medical Control if ALL of the following criteria have been met:
 - Patient must be 18 years of age or older.
 - Adequate CPR has been administered.
 - Airway has been successfully managed with verification of device placement. Acceptable management techniques include oral-tracheal intubation, nasal-tracheal intubation, Blind Insertion Airway Device (BIAD) placement, or cricothyrotomy.
 - IV or IO access has been achieved.
 - No evidence or suspicion of any of the following:
 - Drug/toxin overdose
 - Preceding trauma.
 - Active internal bleeding.
 - Hypothermia
 - Rhythm appropriate medications and defibrillation have been administered according EMS Protocols for a total of 3 cycles of drug therapy without return of spontaneous circulation (palpable pulse).
 - All EMS paramedic personnel involved in the patient's care and family members or caregivers agree that discontinuation of the resuscitation is appropriate.
2. If all of the above criteria are not met and discontinuation of prehospital resuscitation is desired, contact Medical Control.
3. The Deceased Subjects Policy should be followed. Document all patient care and interactions with the patient's family, personal physician, medical examiner, law enforcement, and medical control in the EPCR.
4. Documentation and EPCR should be completed by the highest licensed individual on scene.

Patient Refusal Of Care

Policy:

An informed and mentally competent individual may refuse EMS treatment and transport.

Purpose:

The purpose of this policy is to:

- Assess the cognition and understanding of a patient wanting to refuse EMS care.
- Provide the steps to educate and inform a patient of their choices and relative consequences by refusing EMS care.

Procedure:

I. ALL PROVIDER LEVELS

1. On those incidents where there is no patient, no one has any obvious injury, or no one appears to be in medical distress and everyone is alert and oriented to person, place, and time, with a glasgow coma score of 15, the provider shall make the appropriate documentation on the ambulance Incident report and return promptly back to service.
2. Should the patient be stable and not suffering from any life threatening or potentially life threatening emergency condition , and the patient does not wish to be transported to the hospital , the provider shall
 - A. Provide a thorough initial and detailed physical exam . If patient refuses this must be clearly documented on chart.
 - B. Document all findings, including one complete set of vital signs if patient allows .
 - C. Explain the risks and possible consequences of not seeking medical care and treatment (death, permanent disability, worsening of condition).
 - D. Encourage the patient to reconsider transport to a hospital .
 - E. Let the patient and others with the patient know that if the patient's condition should get worse they should call 9-1-1 again for emergency treatment and transportation .
 - F. Have the patient sign the refusal section of the ambulance incident report and have a disinterested third party (family, PD) witness the signature (when possible).
 - i. Should the patient be stable and not wish treatment or transportation to the hospital but refuses to sign the ambulance reporting form and there is no disinterested third party to affirm the refusal , the provider shall complete all necessary documentation, including the patient care report, and immediately notify a supervisor of the situation before leaving the patient and await direction of the supervisor .
 - ii. Should the patient have a life threatening or potentially life threatening emergency and does not wish transportation to the hospital after the provider has explained the possible risks and consequences (including the possibility of death) to the patient, the provider shall contact Medical Control to speak with an Emergency Room Physician explain the situation to the doctor and have the doctor speak with the patient . If the patient still chooses not to go to the hospital the crew will advise the supervisor of the situation and await direction , documenting all findings.

II. Advanced Life Support Providers

1. If the patient has not received advanced life support to correct the mental status of the patient , the patient is stable and has no other medical or trauma complaints or illness after a thorough initial and secondary exam with a complete set of normal vital signs and elects not to be transported to the hospital, the crew may obtain a written refusal after documenting all findings and return to service.
2. If a patient has received advanced life support intervention and now the patient is alert and oriented to person , place and time, has a GCS of 15, shows no signs of psychosis, trauma, or medical illness that could impair their ability to receive, evaluate, and communicate information and has received a thorough initial and secondary exam, including a complete set of vital signs, and still does not wish to be transported to the hospital after the provider has explained the possible risks and consequences (including the possibility of death) to the patient, the provider shall contact Medical Control to speak with an Emergency Room Physician. Explain the situation to the doctor and have the doctor speak with the patient. If the patient still chooses not to go to the hospital the crew will advise the supervisor, complete all documentation and return to service.

Out of Hospital Do Not Resuscitate

Policy:

EMS roles and responsibilities in the presence of a valid Do Not Resuscitate order.

Purpose:

The purpose of this policy is to:

- Honor patients end-of-life wishes through a valid and legally binding Do Not Resuscitate order

Procedure:

- I. Out of Hospital Do Not Attempt Resuscitation Order responders will follow Missouri Rules Chapter 190.230 which states any form claiming to be an DNR will include the following minimum information
 - A. The patient's name
 - B. The patient's date of birth
 - C. The name of the individual authorized to act on the patient's behalf, such as guardian, or agent under a durable power of attorney for health care. A copy of the durable power of attorney is encouraged, but not required.
 - D. Signature
 1. The patient's signature or
 2. The signature of the individual authorized to act on the patient's behalf or
 3. A written certification by the patient's physician that the treatment options were discussed with and consented to by the patient or individual authorized to act on the patient's behalf.
 - E. A brief statement describing the patient's condition, including diagnosis and prognosis
 - F. The signature of the patient's physician
 - G. The date the form is signed
 - H. A concise statement of the nature and scope of the order
 - I. Any other information necessary to provide instructions to a Pre Hospital Medical Provider (EMT, of EMT-P).
- II. Decision to Withhold Resuscitation A pre hospital medical care provider covered under these protocols shall withhold or withdraw any attempt to resuscitate a patient outside a hospital, including but not limited to the patient's residence, a family member's residence or a licensed facility when provided with a valid and complete Out of Hospital Do Not Attempt Resuscitation Order.
- III. A Do Not Resuscitate order is considered revoked when
 - A. A patient or an individual authorized to act on the patient's behalf as designated on the DNR is able to communicate in a manner such that the pre-hospital medical provider would have reasonable cause to believe that the patient or individual intends to revoke the order.
 1. The personal wishes of family members or other individuals who are not authorized in the order to act on the patient's behalf shall not supersede a valid order.
 - B. If uncertainty regarding the validity or applicability of an order exists, the pre-hospital medical provider shall attempt necessary and appropriate resuscitation.
 1. An example would be a response to a person who is choking and has an order due to cancer. In this incident the order would not apply and the provider would give the full range of care afforded under the appropriate protocol.

NOTE: An Out-of-Hospital-Do-Not-Resuscitate order can not be in effect while a patient is pregnant!

Documentation of Vital Signs

Policy:

Every patient encounter by EMS will be documented. Vital signs are a key component in the evaluation of any patient and a complete set of vital signs is to be documented for any patient who receives some assessment component.

Purpose:

The purpose of this policy is to:

To insure:

- Evaluation of every patient's volume and cardiovascular status
- Documentation of a complete set of vital signs

Procedure:

1. An initial complete set of vital signs includes:
 - Pulse rate
 - Systolic AND diastolic blood pressure
 - Respiratory rate
 - Pain / severity (when appropriate to patient complaint)
 - GCS
 - AVPU
 - Pulse Oximetry
2. Based on patient condition and complaint, vital signs may also include:
 - Temperature
 - End Tidal CO₂ (If Invasive Airway Procedure)
 - Breath Sounds
3. If the patient refuses this evaluation, the patient's mental status and the reason for refusal of evaluation must be documented. A Patient Refusal of Care should be completed.
4. Document situations that preclude the evaluation of a complete set of vital signs.
5. Record the time vital signs were obtained.
6. Any abnormal vital sign should be repeated and monitored closely.
7. All priority 1, 2, 3 transported patients with a transport time greater than 5 minutes should have a minimum of 2 sets of vital signs documented.
 - Receiving facility initial vital signs may be used as second set for EMS.
 - Critical interventions take priority over obtaining a second set of vital signs.

Physician On Scene

Policy:

The medical direction of prehospital care at the scene of an emergency is the responsibility of those most appropriately trained in providing such care.

Purpose:

To identify a chain of command to allow field personnel to adequately care for the patient
To assure the patient receives the maximum benefit from prehospital care
To minimize the liability of the EMS system as well as the on-scene physician

Procedure:

1. When a non medical-control physician requests to provide care for a patient outside of the protocols provided in this document, the treating EMS staff member will thank them for their assistance, ask for their medical license number and record this number in the narrative section of the PCR, inform the physician that it is prohibited to exceed the protocols provided, and inform the physician that in assuming a relationship with the patient as a physician they assume all legal risks associated with their care and are to remain with the patient until another physician assumes care. Contact medical control. The medical control physician must relinquish responsibility of the patient. If medical control refuses, inform the physician on scene that their assistance is valued, but unapproved by the medical control physician. Continue with care consistent with published protocols.
2. When the patient is being attended by a physician with whom they have an ongoing patient relationship, EMS personnel may follow orders given by the physician if the orders conform to current EMS guidelines, and if the physician signs the PCR. Notify medical control at the earliest opportunity. Any deviation from local EMS protocols requires the physician to accompany the patient to the hospital.
3. EMS personnel may accept orders from the patient's physician over the phone with the approval of medical control. The paramedic should obtain the specific order and the physician's phone number for relay to medical control so that medical control can discuss any concerns with the physician directly.

Patient Transport

Policy:

All individuals served by the EMS system will be evaluated, treated, and furnished transportation (if indicated) in the most timely and appropriate manner for each individual situation.

Purpose:

To provide:

Rapid emergency EMS transport when needed.

Appropriate medical stabilization and treatment at the scene when necessary

Protection of patients, EMS personnel, and citizens from undue risk when possible.

Procedure:

1. All trauma patients with significant mechanism or history for multiple system trauma will be transported as soon as possible. The scene time should be 10 minutes or less.
2. All acute Stroke and acute ST-Elevation Myocardial Infarction patients will be transported as soon as possible. The scene time should be 10 minutes or less for acute Stroke patients and 15 minutes or less (with 12 Lead ECG) for STEMI patients
3. Other Medical patients will be transported in the most efficient manner possible considering the medical condition . Advanced life support therapy should be provided at the scene if it would positively impact patient care . Justification for scene times greater than 20 minutes should be documented.
4. In the event that a Basic Life Support unit has been dispatched to a emergency call it is reasonable and prudent to begin transportation without awaiting the arrival of a staff member capable of rendering Advanced Life Support care if it is in the best interest of the patient e.g. chest pain, stroke, trauma, etc.

Multiple Casualty Event

Policy:

This policy is to be used during a traumatic event with multiple patients in order to provide the best care to the most patients in the shortest period of time.

Purpose:

To provide:

Triage, treatment, and transport for patients in a incident which would require multiple resources

Procedure:

Medical Control: The first medical unit on scene becomes Medical Control and communicates directly with the individual performing the duties of Incident Command. Medical Control may delegate tasks, but not responsibility. Communications: Medical Control may elect an individual to perform the duties of maintaining communications. The ability to request resources and provide information must be maintained at all times with dispatch and Incident Command.

Triage: Medical Control may elect an individual to perform the duties of triage. This individual should direct the disposition of patients to a triage category and, if appropriate, to an area dedicated to that triage category. Patients will be assigned to one of the following triage categories using the Simple Triage and Rapid Treatment algorithm.

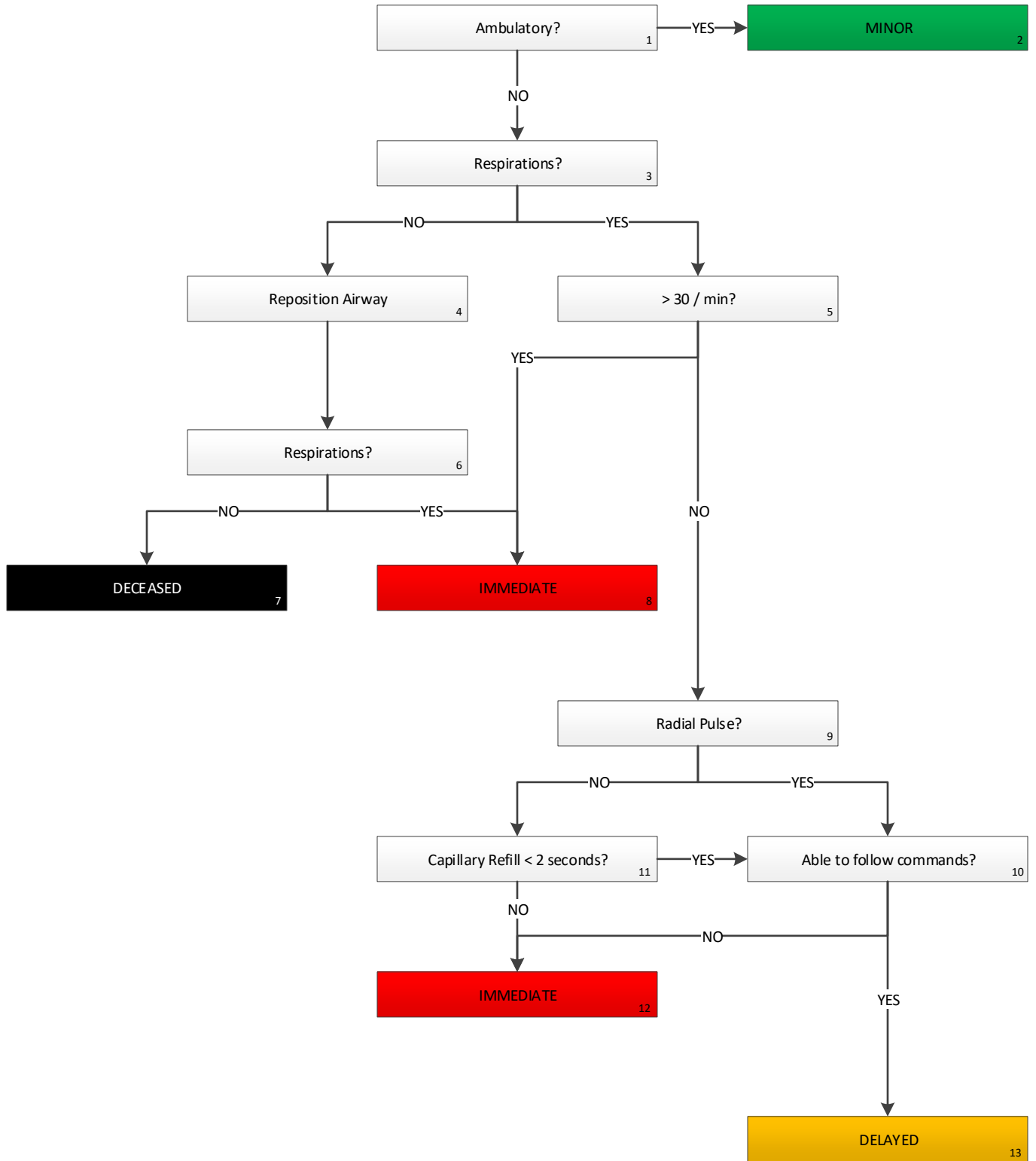
- **Red:** Respiratory Rate > 30 bpm, or absent radial pulses, or altered mental status.
- **Yellow:** Non-ambulatory patients who do not fit Red or Green categories.
- **Green:** Patients who are walking and require transport.
- **Black:** Unresponsive patients without carotid pulses and without spontaneous respirations once the airway has been opened.

Treatment: Medical Control may elect an individual to coordinate care provided to patients prior to their departure from the scene.

Notes:

- Use the EM System if appropriate to reduce transport decision confusion.
- Consider alternate transportation vehicles (busses, trucks) for non-urgent patients
- Consider local hospitals for patients who are not requiring emergent care.
- Consider transporting families and groups to the same destination if possible.

Multiple Casualty Event Triage Flowchart



5 Rights of Drug Administration

Policy:

All individuals will follow the following policy regarding the administration of any medicine.

Purpose:

To reduce the incidence and likelihood of medication errors.

Procedure:

1. Right #1: Ensure you have the right patient.
2. Right #2: Ensure you have the drug you intend to administer.
3. Right #3: Ensure you are about to administer the correct dose.
4. Right #4: Ensure you are administering the drug by the correct route.
5. Right #5: Ensure you give the drug at the right time and over the right period of time.

Non-Transport Intravenous Access

Policy:

Establish care of intravenous access for patient who will not be transported.

Purpose:

Establish care of intravenous access for patient who will not be transported.

Procedure:

I. Indication

- A. A patient who is under the direct care of a nurse who is authorized, licensed, and capable of maintaining an intravenous access line and who has a physician's order for that patient that requires an IV access sight.

II. Procedure

- A. Refer to Protocol I9 Intravenous Infusion
- B. Do not begin any infusion of any medication prescribed by the staff of the facility where the patient is residing.
- C. Give report to the nurse who is directly responsible for the patient and include site, gauge of the catheter, and any complications of the procedure to include number of attempts.
- D. Complete an ambulance report and have the nurse who is directly responsible for the patient sign as the receiving authority for the patient. State in the narrative portion of your documentation that upon departure from the scene, the nurse who signs as the receiving authority accepts responsibility for complications associated with the IV access.
- E. If the receiving nurse is unable or unwilling to accept these terms then it is not reasonable for the paramedic to initiate the access and transportation should be considered. If the receiving nurse is unable or unwilling to accept these terms after the access has been established contact medical control or consider transporting to the nearest appropriate facility. For an uneventful IV access medical control need not be contacted.
- F. If the paramedic is unable to gain IV access and the staff continues to require this access it is reasonable to transport the patient to an appropriate facility where the access can be started.

BLS Skills Procedures

Policy:

Establish a policy which clarifies BLS procedures that are of use to a higher level of care and are of benefit to the patient

Purpose:

Establish a policy which clarifies BLS procedures that are of use to a higher level of care and are of benefit to the patient

Procedure:

- I. Indication
 - A. Reason to consider hypoglycemia
 - B. Reason to consider cardiac dysrhythmia or injury.
 - C. Reason to consider acid base status
- II. Procedure
 - A. BLS personnel will be permitted to perform blood glucose analysis in accordance with established guidelines . Oral glucose for the treatment of hypoglycemia is consider a basic life support skill.
 - B. A 12 lead ECG may be obtained by a BLS provider to facilitate rapid triage. The interpretation of a 12 lead ECG is not considered a BLS skill. An 12 lead ECG should be acqired to expedite the patient's care.
 - C. The application on an end tidal CO2 adapter to a device designed to provide positive pressure ventilation is considered a BLS skill and should be used to provide information regarding return of spontaneous circulation and adeqacy of resuscitation efforts.

Medication Monthly Expiration and Replenishment

Policy:

Establish a policy that clarifies how Nitro SL tabs and Diltiazem (Cardizem) are replaced at the beginning of every month.

Purpose:

To ensure potency of medication delivered by EMS providers.

Procedure:

Nitro SL tabs:

- The 1st day of every month during medication expiration checks, the crew will replace all bottles of Nitro SL tabs on the Cardiac Monitor and Medication box / Unit shelves.
- If at any time the medic has concern about the integrity of the bottle (possible contamination) of NTG SL tabs they should dispose of and replace that NTG SL bottle no matter the day of the month.

Diltiazem (Cardizem):

- The 1st day of every month during medication expiration checks, the crew will dispose of any Diltiazem(Cardizem) in the Medication box, Jump Bag or Vehicle Shelf with a replacement from the station refrigerated stock.

Expired Medications:

- The 1st day of every month during medication expiration checks, the crew will replace any medications, fluids, devices, etc. with a printed expiration date that has passed.
 - If the printed expiration date includes a day of the month, then the medication is good until the date printed.
 - If the printed expiration date only lists a month an a year, then the medication is good until the end of the printed month.

NOTE: When administering NTG SL tabs from EMS stock medic should always keep the bottle from contamination. Avoid using the bottle cap as an administration vehicle so the cap is not in the vicinity of patients mouth causing contamination.

Mental Health Transport

Policy:

The policy is to allow the Mental Health Transport unit to be used for inter-facility transport of patients with limited medical need.

Purpose:

The purpose of this policy is to describe the circumstances where a Mental Health Transport unit may be used for the inter-facility transport of patients.

Procedure:

Inclusion:

1. A patient may be transported by a Mental Health Transport if all of the following are met
 - a. The patient is over the age of 18 or is an emancipated minor
 - b. A physician has determined that the patient will benefit as a result of transportation to a facility with greater mental health care capacity.
 - c. A physician has determined that the patient is medically stable and that the patient's medical condition is not expected to deteriorate during transport.
 - d. The physician has determined that the patient does not require physical or chemical restraint.
 - e. A physician has determined that the patient has a minimal risk of elopement.
 - f. A physician has determined that the patient has a minimal risk of becoming combative during transport
 - g. The patient does not have medical or physical requirements that would exclude them from travelling in the Mental Health Transport (e.g. morbidly obese, oxygen requirement, etc.)
 - h. The patient is alert, oriented, and able to ambulate without assistance.

Exclusion:

1. A patient should not be considered for transportation by a Mental Health Transport if in the opinion of any staff any of the following are met
 - a. The patient is or has a risk of becoming combative
 - b. The patient has a risk of elopement
 - c. The patient is restrained chemically or physically
 - d. The patient is not alert, oriented, or able to ambulate without assistance
 - e. The patient has a medical or physical requirement that prevents them from being transported in an MHT.
 - f. On long distance transfers with multiple patients additional staff should be considered.

Pediatric Safety Restraint

Policy:

Pediatric patients will be transport properly secured using the appropriate weight based pediatric restraint system, or the standardized equipment available for older pediatric patients.

An infant or child shall not be placed in the front passenger seat due to possible air bag deployment and inappropriate restraint equipment.

Purpose:

Ultimate goal is to prevent forward motion/ejection, secure the torso, and protect the head, neck and spine of all infants, children and adolescents transported in emergency ground ambulances. Safe transportation of the patient is of the utmost importance.

Procedure:

Procedure:

See diagram in Policy 17A

Definition:

Per Missouri Health and Human Services Child Fatality Review Panel Legislation the definition of a child extends from birth to the day the child turns 18.

*The Do's and Don'ts of Transporting Children in an Ambulance

Do's

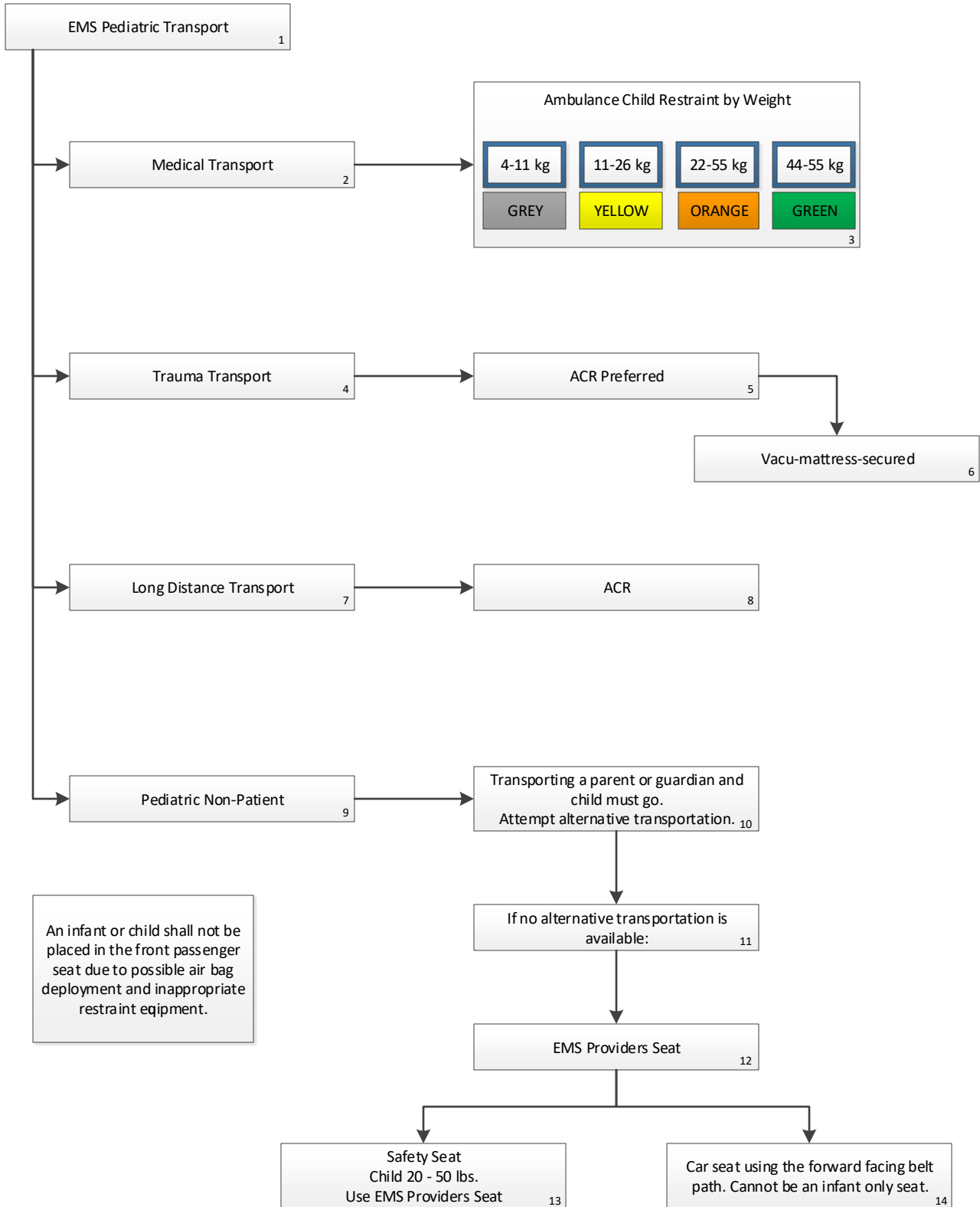
- DO drive cautiously at safe speeds observing traffic laws.
- DO tightly secure all monitoring devices and other equipment
- DO ensure available restraint systems are used by EMTs and other occupants, including the patient.
- DO transport children who are not patients, properly restrained, in an alternate passenger vehicle, whenever possible.
- DO encourage utilization of the DOT National Standard Driving Course.

Don'ts

- DO NOT drive at unsafe high speeds with rapid acceleration, decelerations, and turns.
- DO NOT leave monitoring devices and other equipment unsecured in moving EMS vehicles.
- DO NOT allow parents, caregivers, EMTs or other passengers to be unrestrained during transport.
- DO NOT have the child/infant held in the parent, caregiver, or EMT's arms or lap during transport.
- DO NOT allow emergency vehicles to be operated by persons who have not completed the DOT National Standard Driving Course equivalent.

*Adopted from the US Department of Transportation, NHTSA and United States Department of Health and Human Services Maternal and Child Health Bureau.

Pediatric Safety Restraint Diagram



Domestic Violence

Policy:

Domestic violence is physical, sexual, or psychological abuse and/or intimidation, which attempts to control another person in a current or former family, dating, or household relationship. The recognition, appropriate reporting, and referral of abuse is a critical step to improving patient safety, providing quality health care, and preventing further abuse.

Elder abuse is the physical and/or mental injury, sexual abuse, negligent treatment, or maltreatment of a senior citizen by another person. Abuse may be at the hand of a caregiver, spouse, neighbor, or adult child of the patient. The recognition of abuse and the proper reporting is a critical step to improve the health and wellbeing of senior citizens.

Purpose:

Assessment of an abuse case based upon the following principles:

- Protect the patient from harm, as well as protecting the EMS team from harm and liability.
- Suspect that the patient may be a victim of abuse, especially if the injury/illness is not consistent with the reported history.
- Respect the privacy of the patient and family.
- Collect as much information and evidence as possible and preserve physical evidence.

Procedure:

1. Assess the/all patient(s) for any psychological characteristics of abuse, including excessive passivity, compliant or fearful behavior, excessive aggression, violent tendencies, excessive crying, behavioral disorders, substance abuse, medical non-compliance, or repeated EMS requests. This is typically best done in private with the patient.
2. Assess the patient for any physical signs of abuse, especially any injuries that are inconsistent with the reported mechanism of injury. Defensive injuries (e.g. to forearms), and injuries during pregnancy are also suggestive of abuse. Injuries in different stages of healing may indicate repeated episodes of violence.
3. Assess all patients for signs and symptoms of neglect, including inappropriate level of clothing for weather, inadequate hygiene, absence of attentive caregiver(s), or physical signs of malnutrition.
4. Immediately report any suspicious findings to both the receiving hospital (if transported). If an elder or disabled adult is involved, also contact the Department of Social Services (DSS) or equivalent in the county. After office hours, the adult social services worker on call can be contacted by the 911 communications center.
5. EMS personnel should attempt in private to provide the patient with the phone number of the local domestic violence program, or the **National Hotline, 1-800-799-SAFE**.

Transportation Under Duress

Policy:

Evaluation & Management of Patients Transported Under Duress

Purpose:

The purpose of this policy is to establish a standardized way of approaching the multi-agency situation of transporting a patient in custody potentially against their will.

Procedure:

I. Definitions

- a. **In Custody:** A person who has been arrested or detained by a peace officer for a specific reason or offense. This may include detention of a person who has demonstrated a risk to themselves or others and requires medical assessment.
- b. **Under Arrest:** An action by a peace officer pursuant to a warrant issued by a judge where by an individual is taken into physical restraint and to jail or some other area of confinement as authorized by law.
- c. **Court Order:** An order issued by a judge whereby a person is ordered to do or not to do something. Typically, this involves the involuntary admission of a patient to a hospital for evaluation.

II. Evaluation of patients who are transported under duress

- a. A person who is in custody, under arrest, or is being transported subsequent to a court order is considered to be transported under duress.
- b. If a peace officer requests that a pre-hospital provider evaluate a person who is to be transported under duress that person is a patient.
- c. The evaluation of patients who are being transported under duress is no different from the evaluation of any other patient.
- d. These patients retain the right to self-determination with regard to assessment and treatment. Pre-hospital providers shall not touch a patient or initiate treatment against a patient's will unless failure to do so would likely result in imminent death or permanent disability.
- e. Patients who are to be transported under duress DO NOT have the right to refuse ambulance transport. If a peace officer requests that one of these patients be transported pre-hospital staff will transport the patient. Patient restraint, if indicated by patient condition or requested/recommended by the peace officer, will be in accordance with pre-hospital protocols.
- f. As a physician's order by the medical director and through this policy pre-hospital staff who are transporting patients under duress WILL NOT release the patient, or transfer responsibility of the patient, to anyone other than another pre-hospital staff member, a peace officer, or hospital staff.

III. Acute Adult Psychiatric Patients

- a. To make a medical decision a patient must:
 - i. Be able to RECEIVE information from a medical professional informing them of the suspected condition, the possible interventions indicated for that condition, and the consequences of those interventions or refusing them. For example, a person may not be able to receive information if there is a language barrier, if they have sustained an injury that prevents them from hearing, or if they have psychosis preventing them from receiving information effectively.
 - ii. Be able to UNDERSTAND the consequences of choosing an intervention or refusing those interventions. A person may not be able to understand information if their mental status is altered due to injury, stroke, intoxication, infection, or hypoglycemia, etc.
- b. A patient is considered a risk to themselves and/or others if:
 - i. They have made statements with suicidal or homicidal intent to third OR the patient has committed some act AND those third parties are willing to commit those statements in an affidavit.
 - ii. They have made statements with suicidal or homicidal intent to health professionals.
- c. If, after an initial evaluation, the pre-hospital staff member caring for the patient concludes that the patient is unable to receive information regarding their condition OR understand the consequences of their decisions, OR they are considered a risk to themselves and/or others AND it is likely the patient has a medical issue requiring medical evaluation THEN the pre-hospital staff will transport the patient to the hospital regardless of the patient's level of consciousness and orientation. If the patient refuses transportation, then the pre-hospital staff should seek the assistance of a law enforcement officer to place the patient in custody. Involving medical control in this process is recommended.
- d. In accordance with Missouri Statute Title XII Chapter 190.144 " No emergency medical technician licensed under section 190.142 or 190.143, if acting in good faith and without gross negligence, shall be liable for:
 - i. Transporting a person for whom an application for detention for evaluation and treatment has been filed under section 631.115 or 632.305;
 - ii. Physically or chemically restraining an at-risk behavioral health patient as that term is defined under section 190.240 if such restraint is to ensure the safety of the patient or technician.

Transfer of Patient Care

Policy:

Establish a policy that standardizes the transfer of patient care from a ground unit to any other provider.

Purpose:

To provide guidelines for transfer of patient care, in the field.

- To helicopter crews.
- To other ground ambulance crews
- Receiving Facilities

Procedure:

1. Patient Care Authority

- The highest medically qualified pre-hospital personnel on-scene of the emergency will have patient care authority.
- The individual with patient care authority is responsible for the decision to turn patient care over to any other authority.
- The individual with patient care authority is responsible for the patient until care is turned over to another appropriate pre-hospital care provider.

2. TEAMWORK

It is in the best interest of the patients and consistent with PARTNERS in Caring of CoxHealth to function as a team with any receiving pre-hospital unit, helicopter service or receiving facility.

3. Transfer of Care

- Transferring care to a helicopter service CoxHealth EMS will assume full patient care authority until verbal patient report is given to the receiving care provider.
- Transferring care to another ground unit:
 - When a patient is being transferred to another ground unit due to mechanical difficulties CoxHealth EMS will assume full patient care authority until patient report and care has been transferred to the receiving crew. CoxHealth medical control and protocols will be utilized during this time.
 - If the patient is under the care of CoxHealth EMS during an MCI, in-coming units will assume the care of the patient / patients assigned to them.
 - If the patient being transferred from one hospital to another Medical Control, the closest hospital should be contacted. If the receiving hospital is available for contact, medical control should be established with the receiving hospital.
- When responding to call with non-transporting response unit / EMRA, CoxHealth EMS will assume patient care authority upon arrival on scene.
- CoxHealth EMS Lead Care Giver will provide information pass off to receiving units or facility consistent with the strategies of SBAR.
- S-Situation
- B-Background
- A-Assessment including any Vital Signs
- R-Requests or Recommendations