

## **DRUG PROFILE**

The following is the basic information and guideline for use of:

# **ADENOSINE**

|                      |     |     |      |      |
|----------------------|-----|-----|------|------|
| Approved for use by: | EMR | BLS | AEMT | EMTP |
|                      |     |     |      | XX   |

### **DRUG ACTION:**

- Blocks the AV node to slow conduction and treat reentry conditions (tachyarrhythmias)

### **INDICATIONS FOR USE**

- Symptomatic supraventricular tachycardia

### **CONTRAINDICATIONS**

- Allergy to the drug
- Heart block
- Drug-induced tachycardias (e.g. from cocaine)

### **SIDE EFFECTS:**

- Feeling of impending doom
- Shortness of Breath
- Metal taste in mouth
- Headache
- Facial flushing
- Chest pressure
- Nausea

### **SPECIAL NOTES:**

- Very short duration of action. Must enter the circulation and get to the heart within 10-20 seconds.
- After injection a 20 cc syringe bolus is suggested. Run monitor paper after injection to capture rhythm change.

### **USUAL DOSE:**

- Adult: 6 mg IV bolus followed by 10-20 ml flush; second dose 12 mg IV bolus followed by flush.
- Pediatric: 0.1 mg/kg IV bolus followed by a 10-20 ml flush, maximum of 6 mg; second dose 0.2 mg/kg followed by flush, maximum 12 mg

### **ROUTE:** IVP, IO

### **MONITOR, REPORT, DOCUMENT**

- Continuous ECG after injection
- Attempt to capture conversion on ECG paper
- Vital signs before and within 5 minutes after administration.

## **DRUG PROFILE**

The following is the basic information and guideline for use of:

# **ALBUTEROL**

|                                     |     |     |      |      |
|-------------------------------------|-----|-----|------|------|
| Approved for use by:                | EMR | BLS | AEMT | EMTP |
|                                     |     |     | XX   | XX   |
| Pt. Assisted with Medical Direction |     | XX  |      |      |

### **DRUG ACTION:**

- Bronchodilator

### **INDICATIONS FOR USE:**

- Bronchospasm (asthma, COPD)
- Lung sounds-Wheezing

### **CONTRAINDICATIONS:**

- Allergy to the drug

### **SIDE EFFECTS:**

- Headache
- Tachycardia
- Hypertension

### **SPECIAL NOTES:**

- Monitor patients with cardiovascular disease
- May be given BVM on appropriate patients- Need special connector
- Adults will usually receive albuterol mixed with Atrovent by EMTP providers
- Patients on beta blockers may require multiple treatments or consider Epi

### **USUAL DOSE**

- Adult and Pediatric: 2.5 mg (0.5 ml) nebulized with 2.5 ml saline (total of 3 ml)

**ROUTE:** Hand Neb, Inhaler

### **MONITOR, REPORT, DOCUMENT:**

- Monitor ECG in patients with cardiac history or over age 40
- Vital signs within 5 minutes of administration and at completion of treatment

## **DRUG PROFILE**

The following is the basic information and guideline for use of:

# **AMIODARONE**

| Approved for use by: | EMR | BLS | AEMT | EMTP |
|----------------------|-----|-----|------|------|
|                      |     |     |      | XX   |

### **DRUG ACTION:**

- Antiarrhythmic

### **INDICATIONS FOR USE:**

- Ventricular tachycardia, ventricular fibrillation
- Can be used to treat tachyarrhythmias

### **CONTRAINDICATIONS:**

- Allergy to the drug
- Heart block
- Bradycardia
- Known or suspected drug-induced dysrhythmia (e.g. from cocaine)

### **SIDE EFFECTS:**

- Bradycardia
- Hypotension
- Congestive heart failure
- Heart block

### **SPECIAL NOTES:**

- Pediatric Dose 5mg/Kg

### **USUAL DOSE:**

- Adult:
  - 300 mg diluted into 20 ml for ventricular fibrillation or pulseless ventricular tachycardia
  - 150 mg IV bolus over 10 minute period for stable ventricular tachycardia, 1 mg/min drip for maintenance
- Pediatric:
  - Dose 5mg/Kg

### **ROUTE:** IV, IO

### **MONITOR, REPORT, DOCUMENT**

- Continuous ECG
- Vital signs within 5 minutes before and after administration

**DRUG PROFILE**

The following is the basic information and guideline for use of:

**ASPIRIN (ACETYLSALICYLIC ACID, ASA)**

|                      |     |     |      |      |
|----------------------|-----|-----|------|------|
| Approved for use by: | EMR | BLS | AEMT | EMTP |
|                      |     | XX  | XX   | XX   |

**DRUG ACTION:**

- Analgesic (pain relief)
- Anti-inflammatory
- Relieves fever
- Impedes blood clotting--makes blood slippery

**INDICATIONS FOR USE:**

- Given to patients with signs/symptoms of ischemic chest pain (suspected myocardial infarction)

**CONTRAINDICATIONS:**

- Allergy to the drug
- Bleeding disorders
- Affirmative answer to any question in the special note section below.

**SIDE EFFECTS:**

- Nausea
- Gastrointestinal bleeding
- Rash

**SPECIAL NOTES:**

- Low doses are more effective for anti-clotting effect

**ASK PATIENT:**

- Have you taken any aspirin already today?
- Are you allergic to aspirin?
- Do you have any bleeding disorder?
- Do you already take another anticoagulant?

**USUAL DOSE**

- 162-324 mg chewable tablets (2-4 baby aspirin)

**ROUTE:** Oral

**MONITOR, REPORT, DOCUMENT:**

- Vital signs within 5 minutes after administration

## **DRUG PROFILE**

The following is the basic information and guideline for use of:

# **ATROPINE**

|                      |     |     |      |      |
|----------------------|-----|-----|------|------|
| Approved for use by: | EMR | BLS | AEMT | EMTP |
|                      |     |     |      | XX   |

### **DRUG ACTION:**

- Block the effects of the vagus nerve (parasympathetic)

### **INDICATIONS FOR USE:**

- Symptomatic bradycardia
- Heart blocks
- Organophosphate poisoning

### **CONTRAINDICATIONS:**

- Allergy to the drug
- Glaucoma

### **SIDE EFFECTS:**

- Palpitations
- Tachycardia
- Blurred vision
- Dry mouth

### **SPECIAL NOTES:**

- PupAEMT will dilate. Note pupil size prior to administration

### **USUAL DOSE:**

- Adults: 0.5-1.0 mg for cardiac; 2-3 mg for organophosphate poisoning
- Pediatric: 0.02 mg/kg. Minimum dose 0.1 mg

**ROUTE:** IV, IM, ET, IO

### **MONITOR, REPORT, DOCUMENT:**

- Pulse rate before and after administration
- Vital signs within 5 minutes after administration
- Continuous ECG

## **DRUG PROFILE**

The following is the basic information and guideline for use of:

# **CALCIUM CHLORIDE**

|                      |     |     |      |      |
|----------------------|-----|-----|------|------|
| Approved for use by: | EMR | BLS | AEMT | EMTP |
|                      |     |     |      | XX   |

### **DRUG ACTION:**

- Cardiac stimulant, increases force of contraction
- Calcium as an element is required for many physiological activities

### **INDICATIONS FOR USE:**

- Calcium channel blocker overdose
- Elevated potassium (hyperkalemia)
- Low calcium (hypocalcemia)

### **CONTRAINDICATIONS:**

- Patient taking digitalis (Use with caution)
- Ventricular tachycardia
- Ventricular fibrillation

### **SIDE EFFECTS:**

- Bradycardia
- Arrhythmias
- Syncope
- Cardiac arrest

### **SPECIAL NOTES:**

- Flush line before administering sodium bicarbonate (causes precipitation)
- Be sure the IV is not infiltrated, causes tissue sloughing

### **USUAL DOSE:**

- Adult: 100-500 mg IV bolus
- Pediatric: 20 mg/kg, maximum dose 500 mg

**ROUTE:** IV, IO

### **MONITOR, REPORT, DOCUMENT:**

- Continuous ECG
- Vital signs before and within 5 minutes after administration

## **DRUG PROFILE**

The following is the basic information and guideline for use of:

# **DEXTROSE – D-50**

|                      |     |     |      |      |
|----------------------|-----|-----|------|------|
| Approved for use by: | EMR | BLS | AEMT | EMTP |
|                      |     |     | XX   | XX   |

### **DRUG ACTION:**

- Provides calories for metabolic needs
- Rapidly elevated blood glucose levels

### **INDICATIONS FOR USE:**

- Documented Hypoglycemia

### **CONTRAINDICATIONS:**

- Increased intracranial pressure
- Alcoholic in delirium tremors
- CVA

### **SIDE EFFECTS:**

- Hyperglycemia

### **SPECIAL NOTES:**

- Will cause tissue sloughing if infiltrated
- Must be diluted before administration to children to D-25
- Especially in children, IM Glucagon should be considered prior to attempting peripheral IV and IV Dextrose.
- Patients who refuse transport after D-50 administration, must eat and drink prior to EMTP squad leaving

### **USUAL DOSE:**

- In the patient >100 pounds with an altered level of consciousness, who is unable to safely take oral glucose and with a blood glucose level less than 60 mg%, administer 12-25 grams Dextrose IV bolus.
- In the patient <100 pounds but at least 2 years old, administer 500 mg/kg Dextrose diluted 1:1 with NS. Dilute 50 ml of 50% Dextrose with 50 ml saline to achieve D25W. Administer 2 ml/kg of D25W slow IVP
- For patients younger than 2 years, contact medical control for appropriate dose and dilution of dextrose.

**ROUTE:** IV, IO

### **MONITOR, REPORT, DOCUMENT**

- Changes in level of consciousness
- Blood sugar before and after treatment
- Vital signs within 5 minutes after administration

## **DRUG PROFILE**

The following is the basic information and guideline for use of:

# **DILTIAZEM**

|                      |     |     |      |      |
|----------------------|-----|-----|------|------|
| Approved for use by: | EMR | BLS | AEMT | EMTP |
|                      |     |     |      | XX*  |

\*Two Rivers Fire and Valders Ambulance only carry diltiazem

### **DRUG ACTION:**

- Calcium channel blocker that inhibits calcium ion influx across cardiac and smooth-muscle cells
- Decreases myocardial contractility and oxygen demand
- Dilates coronary arteries and arterioles

### **INDICATIONS FOR USE:**

- A-Fib/A-Flutter with rapid ventricular response
- SVT/PSVT refractive to Adenosine

### **CONTRAINDICATIONS:**

- In patients with suspected Wolff-Parkinson-White syndrome
- Those with sick sinus syndrome without a pacemaker
- Those with 2<sup>nd</sup> or 3<sup>rd</sup> degree heart block
- Ventricular Tachycardia
- Systolic blood pressure less than 90 mmHg

### **SIDE EFFECTS:**

- Headaches
- Dizziness
- Nausea
- Conduction abnormalities

### **USUAL DOSE:**

- 0.25mg/kg IV over 2 minutes
- If no response to above, 0.35mg/kg IV over 2 minutes

**ROUTE:** IV

### **MONITOR, REPORT, DOCUMENT**

- Breath sounds, vital signs within 5 minutes after administration
- Effect on heart rate and rhythm
- Continuous ECG monitoring and pulse oximetry

## **DRUG PROFILE**

The following is the basic information and guideline for use of:

# **Dilaudid (Hydromorphone)**

|                      |     |     |      |      |
|----------------------|-----|-----|------|------|
| Approved for use by: | EMR | BLS | AEMT | EMTP |
|                      |     |     |      | XX   |

### **DRUG ACTION:**

- Narcotic analgesic (pain relief)
- Central nervous system depressant

### **INDICATIONS FOR USE:**

- Chest pain of cardiac origin
- Burns
- Extremity trauma
- Pain Control

### **CONTRAINDICATIONS:**

- Allergy to the drug
- Hypotension
- Head, chest, abdominal trauma
- Respiratory depression

### **SIDE EFFECTS:**

- Decreased level of consciousness
- Bradycardia
- Hypotension
- Nausea, vomiting
- Respiratory depression

### **SPECIAL NOTES:**

- Addictive, federal regulations apply

### **USUAL DOSE:**

- 0.5 – 1 mg IV Bolus, may be repeated  
1.0 – 2 mg IM Injection, may be repeated

**ROUTE:** IV, IO, IM

### **MONITOR, REPORT, DOCUMENT:**

- Effect on pain level
- Effect on respiratory rate and effort
- ECG monitoring and Pulse ox
- Vital signs within 5 minutes after administration

## **DRUG PROFILE**

The following is the basic information and guideline for use of:

# **DIPHENHYDRAMINE (BENADRYL)**

|                      |     |     |      |      |
|----------------------|-----|-----|------|------|
| Approved for use by: | EMR | BLS | AEMT | EMTP |
|                      |     |     |      | XX   |

### **DRUG ACTION:**

- Antihistamine, blocks histamine's effect on smooth muscle in the respiratory, circulatory and gastrointestinal systems. Histamine causes bronchoconstriction, vasodilatation and GI spasms

### **INDICATIONS FOR USE:**

- Allergic reactions

### **CONTRAINDICATIONS:**

- Allergy to drug
- Glaucoma
- Newborns

### **SIDE EFFECTS:**

- Drowsiness, confusion
- Seizures
- Tachycardia
- Blurred vision
- Nausea, vomiting
- Can cause hyperactivity in children

### **SPECIAL NOTES:**

- Can cause hyperactivity in children

### **USUAL DOSE:**

- 12 and older: 25-50 mg IV or PO
- < 12 years old: 1.25 mg/kg, maximum of 25 mg IV or PO

**ROUTE:** IV, IM, IO, PO

### **MONITOR, REPORT, DOCUMENT:**

- Vital signs within 5 minutes after administration

## **DRUG PROFILE**

The following is the basic information and guideline for use of:

# **DOPAMINE**

|                      |     |     |      |      |
|----------------------|-----|-----|------|------|
| Approved for use by: | EMR | BLS | AEMT | EMTP |
|                      |     |     |      | XX   |

### **DRUG ACTION:**

- Stimulates alpha, beta, and dopaminergic receptors increasing systemic vascular resistance while to some degree increasing the inotropic effect on the heart.

### **INDICATIONS FOR USE:**

- Hypotension not associated with hypovolemia

### **CONTRAINDICATIONS:**

- Allergy to the drug
- Tachydysrhythmias, VF

### **SIDE EFFECTS:**

- Hypertension, tachydysrhythmia (dose related), increased myocardial oxygen demand

### **SPECIAL NOTES:**

- If hypotension related to hypovolemia, tachydysrhythmia are very common.
- MAO's may potentiate the effect of Dopamine

### **USUAL DOSE:**

- Mix 400 mg in 250 cc of normal saline and titrate for effect
- Typical range 5-10 mcg/kg/min
- Titrate dose to BP systolic of 100 mmHg

### **ROUTE:** IV, IO

### **MONITOR, REPORT, DOCUMENT:**

- Continuous ECG
- Vital signs before and within 5 minutes after administration.

**DRUG PROFILE**

The following is the basic information and guideline for use of:

**EPINEPHRINE (ADRENALIN) For Anaphylaxis**

|                      |            |                 |                 |      |
|----------------------|------------|-----------------|-----------------|------|
| Approved for use by: | EMR        | BLS             | AEMT            | EMTP |
|                      | Epi-Pen*** | Epi-Pen, IM Inj | Epi-Pen, IM Inj | XX   |

**\*\*requires additional training**

**DRUG ACTION:**

- Increases heart rate and force
- Vasoconstriction
- Bronchodilation

**INDICATIONS FOR USE:**

- Anaphylaxis

**CONTRAINDICATIONS:**

- No relative contraindications

**SIDE EFFECTS:**

- Headache
- Palpitations
- Hypertension
- Tachycardia

**SPECIAL NOTES:**

- Epi-Pen = 0.3 mg
- Epi-Pen Jr. = 0.15 mg (<60 pounds)

**USUAL DOSE:**

- 0.3mg IM

**ROUTE:** Epi Pen; IM

**MONITOR, REPORT, DOCUMENT:**

- Breath sounds, vital signs within 5 minutes after administration
- Effect on heart rate
- Continuous ECG monitoring and pulse oximetry

## **DRUG PROFILE**

The following is the basic information and guideline for use of:

# **EPINEPHRINE (ADRENALIN) Cardiac/Asthma**

|                      |     |     |      |      |
|----------------------|-----|-----|------|------|
| Approved for use by: | EMR | BLS | AEMT | EMTP |
|                      |     |     |      | XX   |

### **DRUG ACTION:**

- Increases heart rate and force
- Vasoconstriction
- Bronchodilation

### **INDICATIONS FOR USE:**

- Asthma (1:1000 IM)
- Patients in cardiopulmonary arrest while CPR is in progress (IV bolus 1:10,000)

### **CONTRAINDICATIONS:**

- Glaucoma
- Shock other than anaphylactic

### **SIDE EFFECTS:**

- Headache
- Palpitations
- Hypertension
- Tachycardia

### **SPECIAL NOTES:**

- Don't mix with alkaline solutions (sodium bicarbonate)
- May benefit the Asthma patient if other treatments fail

### **USUAL DOSE:**

- 0.1-0.3 mg 1:1000 **for asthma**
- Adult: 1 mg IV, 2 mg ET for cardiac causes
- Pediatrics < 60 pounds (for cardiac):
  - 0.01 mg/kg initial dose
  - Subsequent doses 0.1 mg/kg

**ROUTE:** IV, ET, IO, IM

### **MONITOR, REPORT, DOCUMENT:**

- Breath sounds, vital signs within 5 minutes after administration
- Effect on heart rate
- Continuous ECG monitoring

## **DRUG PROFILE**

The following is the basic information and guideline for use of:

# **ETOMIDATE**

|                      |     |     |      |      |
|----------------------|-----|-----|------|------|
| Approved for use by: | EMR | BLS | AEMT | EMTP |
|                      |     |     |      | XX*  |

**\* EMTP level only with RSI capabilities**

### **DRUG ACTION:**

- Hypnotic with no analgesic activity
- Minimal cardiovascular effects

### **INDICATIONS FOR USE**

- Sedation in RSI

### **CONTRAINDICATIONS**

- Allergy to the drug
- Not for use in children under the age of 10

### **SIDE EFFECTS:**

- Myoclonic twitches
- Apnea
- Hypo or hypertension
- Tachy or Bradycardia
- Nausea and vomiting

### **USUAL DOSE:**

- Adult: 20mg IVP
- Pediatric (over 10): 0.3mg/kg IVP

**ROUTE:** IVP, IO

### **MONITOR, REPORT, DOCUMENT**

- Continuous ECG after injection
- Vital signs before and within 5 minutes after administration.
- Respiratory rate and effort

## **DRUG PROFILE**

The following is the basic information and guideline for use of:

# **Fentanyl Citrate**

| Approved for use by: | EMR | BLS | AEMT | EMTP |
|----------------------|-----|-----|------|------|
|                      |     |     |      | XX   |

### **DRUG ACTION:**

- Narcotic analgesic (pain relief)

### **INDICATIONS FOR USE:**

- Burns
- Extremity trauma
- Severe pain anywhere
- Pain Control
- Short acting pain control

### **CONTRAINDICATIONS:**

- Allergy to the drug
- Hypotension
- Head, chest, abdominal trauma
- Respiratory depression
- In children less than 2 years old
- Patients with myasthenia gravis

### **SIDE EFFECTS:**

- Decreased level of consciousness
- Bradycardia
- Hypotension
- Nausea, vomiting
- Respiratory depression if used with other benzodiazapines

### **SPECIAL NOTES:**

- Addictive, federal regulations apply

### **USUAL DOSE:**

- Adult: 50—100mcg IV bolus, may be repeated
- Peds: 0.5 to 1 mcg/kg not to exceed 50mcg. Child should be at least 2 years of age

### **ROUTE:** IV, IO, IM, IN

### **MONITOR, REPORT, DOCUMENT:**

- Effect on pain level
- Effect on respiratory rate and effort
- ECG monitoring and Pulse ox
- Vital signs within 5 minutes after administration

## **DRUG PROFILE**

The following is the basic information and guideline for use of:

# **Glucagon**

| Approved for use by: | EMR | BLS | AEMT | EMTP |
|----------------------|-----|-----|------|------|
|                      |     | XX  | XX   | XX   |

### **DRUG ACTION:**

Raises blood glucose by stimulating release of glycogen stores  
Increases intracellular CAMP to increase heart rate

### **INDICATIONS FOR USE:**

Documented hypoglycemia  
**PARAMEDIC ONLY:** Beta blocker and calcium channel blocker overdose

### **CONTRAINDICATIONS:**

Allergy to drug or components  
History of pheochromocytoma

### **SIDE EFFECTS:**

Hypertension  
Nausea/vomiting  
Respiratory distress

### **USUAL DOSE:**

For patients weighing >44 pounds, 1 mg glucagon IM for hypoglycemia  
For patients weighing <44 pounds, 0.5 mg glucagon IM for hypoglycemia  
**PARAMEDIC ONLY:** For suspected beta blocker/calcium channel blocker overdose, administer 1mg-5 mg of glucagon IV

### **ROUTE:** IM, IV, IN

### **MONITOR, REPORT, DOCUMENT:**

Vital signs every 5 minutes  
Changes in level of consciousness  
Blood sugar before and after administration

### **SPECIAL NOTES**

IV glucose must be given if patient does not respond to glucagon.  
Drug supplied in powder form and must be re-constituted in solution supplied with powder  
Patient needs to eat carbohydrates soon after awakening and can when (s) he can safely swallow.  
In the pediatric patient, IM glucagon should be administered prior to attempting IV dextrose administration or IV access

## **DRUG PROFILE**

The following is the basic information and guideline for use of:

# **IPRATROPIUM BROMIDE (ATROVENT)**

|                      |     |     |      |      |
|----------------------|-----|-----|------|------|
| Approved for use by: | EMR | BLS | AEMT | EMTP |
|                      |     |     |      | XX   |

### **DRUG ACTION:**

- Long lasting Bronchodilator

### **INDICATIONS FOR USE:**

- Maintenance therapy in patient with Chronic Obstructive Pulmonary Disease (COPD)
- Bronchial asthma

### **CONTRAINDICATIONS:**

- Allergy to the drug, soybeans, peanut
- Glaucoma

### **SIDE EFFECTS:**

- Dry mouth
- Headache
- Gastrointestinal distress

### **SPECIAL NOTES:**

- Not for initial treatment in acute episodes

### **USUAL DOSE:**

- 0.5 mg nebulized with Albuterol
- Adults Only

### **MONITOR, REPORT, DOCUMENT:**

- Monitor ECG in patients with cardiac history or over age 45
- Vital signs and breath sounds within 5 minutes of administration and at completion of treatment

## **DRUG PROFILE**

The following is the basic information and guideline for use of:

# **Labetolol**

|                       |      |     |      |           |
|-----------------------|------|-----|------|-----------|
| Approved for use by:  | FRLS | BLS | AEMT | EMTP      |
| <b>PARAMEDIC ONLY</b> |      |     |      | <b>XX</b> |

### **DRUG ACTION:**

- Beta blocker

### **INDICATIONS FOR USE**

- Myocardial Salvage
- Acute MI with hypertension
- Hypertensive Crisis

### **CONTRAINDICATIONS**

- Caution if Bronchospasms
- Bradycardia
- Hypotension
- Cardiomegaly
- Thyrotoxicosis

### **SIDE EFFECTS:**

- Hypotension
- Bronchospasms
- Bradycardia
- Hypotension
- Headache
- Nausea

### **USUAL DOSE:**

- Adult: 5 mg IV slow push over 2-5 minutes; repeat every 5 minutes to maximum of 15 mg. Maintain BP greater than 100 mmHg and heart rate above 60 BPM.

### **ROUTE:** IV

### **MONITOR, REPORT, DOCUMENT**

- ECG
- Vital signs before and within 5 minutes after administration.

## **DRUG PROFILE**

The following is the basic information and guideline for use of:

# **Lorazepam (Ativan)**

|                      |     |     |      |      |
|----------------------|-----|-----|------|------|
| Approved for use by: | EMR | BLS | AEMT | EMTP |
|                      |     |     |      | XX   |

### **DRUG ACTION:**

- Central nervous system depressant
- Muscle relaxant

### **INDICATIONS FOR USE:**

- Continuous or recurrent seizures, status epilepticus, Muscle relaxer, anxiety, relief of alcohol withdrawal symptoms

### **CONTRAINDICATIONS:**

- Allergy to the drug
- Hypotension
- Altered level of consciousness
- Intoxication
- Narrow angle glaucoma
- 

### **SIDE EFFECTS:**

- Hypotension
- Rash
- Respiratory depression
- Bradycardia

### **SPECIAL NOTES:**

- Controlled substance (federal regulations), addictive
- If used, fill out disposal usage sheet and daily log

### **USUAL DOSE:**

- Adult: 1-2 mg IV, (rectally if unable to establish an IV line)
- Pediatric: 0.05 to 0.1 mg/kg IV, not to exceed 2 mg

**ROUTE:** IV, IM, Rectally

### **MONITOR, REPORT, DOCUMENT**

- Vital signs and respiratory assessment within 5 minutes after administration
- Altered level of consciousness
- Seizure activity
- Constant Pulse ox and ECG monitoring required

## **DRUG PROFILE**

The following is the basic information and guideline for use of:

# **MAGNESIUM SULFATE**

|                      |      |     |      |      |
|----------------------|------|-----|------|------|
| Approved for use by: | FRLS | BLS | AEMT | EMTP |
|                      |      |     |      | XX   |

### **DRUG ACTION:**

- CNS depressant. Slows the rate of the SA nodal impulse formation. Electrolyte supplement for hypomagnesemia and magnesium deficiency to maintain normal neuromuscular irritability.

### **INDICATIONS FOR USE:**

- Refractory ventricular fibrillation
- Pulseless ventricular tachycardia
- Torsades de Pointe
- Suspected hypomagnesia
- Seizures associated with hypertension of pregnancy

### **CONTRAINDICATIONS:**

- Should not be given to patients with heart block

### **SIDE EFFECTS:**

- CNS depression
- Respiratory depression
- Hypotension

### **SPECIAL NOTES:**

- Give with caution to patient with impaired renal function

### **USUAL DOSE:**

- 1-2 grams IV bolus over 2 minutes unless in cardiopulmonary arrest

### **ROUTE:** IV, IO

### **MONITOR, REPORT, DOCUMENT:**

- Continuous ECG
- Vital signs before and within 5 minutes after administration

## **DRUG PROFILE**

The following is the basic information and guideline for use of:

# **MORPHINE SULFATE**

|                      |      |     |      |      |
|----------------------|------|-----|------|------|
| Approved for use by: | FRLS | BLS | AEMT | EMTP |
|                      |      |     |      | XX   |

### **DRUG ACTION:**

- Narcotic analgesic (pain relief)
- Central nervous system depressant

### **INDICATIONS FOR USE:**

- Chest pain of cardiac origin
- Congestive heart failure (CHF)
- Burns
- Extremity trauma
- Pain Control

### **CONTRAINDICATIONS:**

- Allergy to the drug
- Hypotension
- Head, chest, abdominal trauma
- Respiratory depression

### **SIDE EFFECTS:**

- Decreased level of consciousness
- Bradycardia
- Hypotension
- Nausea, vomiting
- Respiratory depression

### **SPECIAL NOTES:**

- Addictive, federal regulations apply

### **USUAL DOSE:**

- 2-4 mg IV bolus, may be repeated
- Pediatric dose: 0.05 to 0.1mg/kg

**ROUTE:** IV, IO, IM

### **MONITOR, REPORT, DOCUMENT:**

- Effect on pain level
- Effect on respiratory rate and effort
- ECG monitoring and Pulse ox
- Vital signs within 5 minutes after administration

## **DRUG PROFILE**

The following is the basic information and guideline for use of:

# **NALOXONE (NARCAN)**

|                      |      |     |      |      |
|----------------------|------|-----|------|------|
| Approved for use by: | FRLS | BLS | AEMT | EMTP |
|                      |      |     | XX   | XX   |

### **DRUG ACTION:**

- Reverses narcotic-induced respiratory depression and altered level of consciousness

### **INDICATIONS FOR USE:**

- Suspected narcotic overdose in patients with altered level of consciousness
- Unconscious patients with constricted pupils

### **CONTRAINDICATIONS:**

- Allergy to the drug

### **SIDE EFFECTS:**

- Tremors
- Tachycardia
- Nausea, vomiting

### **SPECIAL NOTES:**

- May induce narcotic withdrawal in addicts (Nausea, vomiting, diaphoresis, tachycardia, hypertension)
- Duration of action of naloxone may be shorter than the narcotic and the patient may relapse

### **USUAL DOSE:**

- Adults: 2 mg IV, SC, IM, repeated in 2-3 minutes
- Pediatric: 0.01 mg/kg first dose; 0.1 mg/kg second and subsequent doses, maximum dose 2 mg

**ROUTE:** IV, IO, IM, ET, IN

### **MONITOR, REPORT, DOCUMENT:**

- Changes in level of consciousness
- Vital signs within 5 minutes after administration

## **DRUG PROFILE**

The following is the basic information and guideline for use of:

# **Nitroglycerin**

|                      |      |                            |           |           |
|----------------------|------|----------------------------|-----------|-----------|
| Approved for use by: | FRLS | BLS                        | AEMT      | EMTP      |
|                      |      | <b>XX Patient assisted</b> | <b>XX</b> | <b>XX</b> |

### **DRUG ACTION:**

Decreases venous return  
Vasodilator

### **INDICATIONS FOR USE:**

Acute chest pain of cardiac origin (angina, ischemia, STEMI)  
Acute congestive heart failure

### **CONTRAINDICATIONS:**

Hypotension (systolic blood pressure <100 mmHg)  
Use of any PDE5 inhibitor in the previous 24 hours (Viagra, Levitra) or 48 hours (Cialis)

### **SIDE EFFECTS:**

Headache  
Hypotension (systolic blood pressure <100 mmHg)  
Tachycardia

### **USUAL DOSE:**

Adults: 0.4mg sublingual, may repeat every 3-5 minutes until pain is gone and systolic blood

pressure remains >100 mmHg)

**PARAMEDIC ONLY:** IV nitroglycerin 5-10 mcg/min and titrate to effect in 5 mcg/min increments

(Mix 50 mg of nitroglycerin in a 500 mL bag of D5W).

| Dose (mcg/min) | Rate (mL/hr) | Dose (mcg/min) | Rate (mL/hr) |
|----------------|--------------|----------------|--------------|
| 5              | 3            | 70             | 42           |
| 10             | 6            | 80             | 48           |
| 20             | 12           | 90             | 54           |
| 30             | 18           | 100            | 60           |
| 40             | 24           | 110            | 66           |
| 50             | 30           | 120            | 72           |
| 60             | 36           | 130            | 78           |

**ROUTE:** Sublingual spray/tablet, intravenous

### **MONITOR, REPORT, DOCUMENT:**

Vital signs and pain assessment score within 5 minutes of administration  
Blood pressure before and after each dose/adjustment  
Continuous cardiac monitoring, pulse oximetry, and blood pressure

## **DRUG PROFILE**

The following is the basic information and guideline for use of:

# **Zofran (Ondansetron)**

|                      |      |     |      |           |
|----------------------|------|-----|------|-----------|
| Approved for use by: | FRLS | BLS | AEMT | EMTP      |
|                      |      |     |      | <b>XX</b> |

### **DRUG ACTION**

- A Serotonin 5-HT<sub>3</sub> receptor antagonist.

### **INDICATIONS FOR USE**

- Nausea and Vomiting
- Motion Sickness

### **CONTRAINDICATIONS**

- Hypersensitivity
- Caution if impaired liver function
- Caution if recent abdominal surgery

### **SIDE EFFECTS:**

- Headache
- Dry Mouth
- Constipation
- Fatigue
- Diarrhea
- Hypoxia
- Pyrexia
- Urinary retention
- Dizziness
- Agitation
- Puritus

### **USUAL DOSE:**

- Adult: 4mg IV or IM
- Peds: 0.15 mg/kg IV ONLY

**ROUTE:** IVP, IO, IM

### **MONITOR, REPORT, DOCUMENT**

- Continuous ECG after injection
- Vital signs before and within 5 minutes after administration.
- Respiratory rate and effort

## **DRUG PROFILE**

The following is the basic information and guideline for use of:

# **Plavix**

|                      |      |     |      |           |
|----------------------|------|-----|------|-----------|
| Approved for use by: | FRLS | BLS | AEMT | EMTP      |
|                      |      |     |      | <b>XX</b> |

### **DRUG ACTION:**

- Inhibits adenosine diphosphate binding to platelet receptors (platelet aggregation inhibitor)

### **INDICATIONS FOR USE**

- ST segment elevated MI ONLY

### **CONTRAINDICATIONS**

- **DO NOT GIVE IF PATIENT IS PRESCRIBED PLAVIX**
- Hypersensitivity
- Active Bleeding
- GI bleed
- Intracranial Hemorrhage
- Caution if Trauma

### **SIDE EFFECTS:**

- Nausea
- Dyspepsia
- Hemorrhage
- Epistaxis
- Purpura (skin hemorrhage)
- Pruritus
- Headache
- Arthralgia (joint pain)
- Angioedema

### **USUAL DOSE:**

- Adult: 300mg or 600mg PO

### **ROUTE:** PO

### **MONITOR, REPORT, DOCUMENT**

- ECG
- Vital signs before and within 5 minutes after administration.

## **DRUG PROFILE**

The following is the basic information and guideline for use of:

# **PROCAINAMIDE**

|                      |      |     |      |      |
|----------------------|------|-----|------|------|
| Approved for use by: | FRLS | BLS | AEMT | EMTP |
|                      |      |     |      | XX   |

### **DRUG ACTION:**

- Antiarrhythmic

### **INDICATIONS FOR USE:**

- Ventricular tachycardia, ventricular fibrillation, PVCs
- Reoccurring Ventricular arrhythmias

### **CONTRAINDICATIONS:**

- Allergy to the drug
- Heart block
- Hypotension

### **SIDE EFFECTS:**

- Hypotension
- Bradycardia
- Heart block
- Nausea, vomiting
- Rash

### **SPECIAL NOTES:**

- Monitor the width of the QRS and the blood pressure. If patient develops hypotension or QRS widens greater than 50% stop infusion. If patient converts hang drip.

### **USUAL DOSE:**

- Adult: 20-50 mg/min IV bolus over 5 minute period, maximum dose 17 mg/kg. Mix 1 gram into 250cc of NS. Withdraw 5cc (20mg) from bag and administer over 5 minutes watching for side effects. Once converted run at 1-4mg/min
- Special pediatric considerations: 15 mg/kg over 30-60 minutes only for ventricular tachycardia with pulses

### **ROUTE:** IV, IO

### **MONITOR, REPORT, DOCUMENT:**

- QRS duration
- ECG changes
- Hypotension
- Vital signs before and within 5 minutes after administration

## **DRUG PROFILE**

The following is the basic information and guideline for use of:

# **RACEMIC EPINEPHRINE (VAPONEPHRINE)**

|                      |      |     |      |      |
|----------------------|------|-----|------|------|
| Approved for use by: | FRLS | BLS | AEMT | EMTP |
|                      |      |     |      | XX   |

### **DRUG ACTION:**

- Racemic epinephrine is an epinephrine preparation in a 1:1000 dilution for use by **oral inhalation only**.
- Effects are those of epinephrine.
- Inhalation causes local effects on the upper airway as well as systemic effects from absorption.
- Vasoconstriction may reduce swelling in the upper airway, and beta effects on bronchial smooth muscle may relieve Bronchospasm.

### **INDICATIONS FOR USE**

- Smoke Inhalation with Stridor
- Life threatening airway obstruction suspected secondary to croup or epiglottitis

### **CONTRAINDICATIONS**

- Allergy to the drug

### **SIDE EFFECTS:**

- Tachycardia
- Anxiety
- Palpitations

### **SPECIAL NOTES:**

- Always try to utilize the parents help as the mask may frighten children
- Is heat and photo-sensitive and needs to be protected from heat and light sources
- Do not confuse the side effects with respiratory failure or imminent respiratory arrest.
- If respiratory arrest occurs, it is usually due to patient fatigue or laryngeal spasm. Complete obstruction is not usually present. Ventilate the patient, administer oxygen, and transport rapidly. If you can ventilate and oxygenate the patient adequately with a BVM, intubation is best left to a specialist in a controlled setting
- Try to differentiate croup from epiglottitis by history. Cough is usually present in croup. Do not use a tongue blade to examine the back of the throat. The diagnosis is frequently difficult in the field, but a critical patient deserves a trial of racemic epinephrine during transport. Although used as specific therapy for croup, it may EMTPo buy some time in patients with epiglottitis

### **USUAL DOSE:**

- Do **NOT** delay transport to begin administration
- 0.5ml racemic epinephrine (acceptable dose for all ages) mixed in 3 ml saline, via nebulizer at 6-8 LPM to create a fine mist

### **ROUTE:**

- Inhalation by Nebulizer

### **MONITOR, REPORT, DOCUMENT**

- May have to repeat treatment if symptoms return.

## **DRUG PROFILE**

The following is the basic information and guideline for use of:

# **SODIUM BICARBONATE**

|                      |      |     |      |      |
|----------------------|------|-----|------|------|
| Approved for use by: | FRLS | BLS | AEMT | EMTP |
|                      |      |     |      | XX   |

### **DRUG ACTION:**

- Neutralizes acids

### **INDICATIONS FOR USE:**

- Treat documented metabolic acidosis associated with cardiopulmonary arrest
- Ventricular dysrhythmias secondary to cyclic antidepressants

### **CONTRAINDICATIONS:**

- Alkalosis

### **SIDE EFFECTS:**

- Alkalosis

### **SPECIAL NOTES:**

- Must be diluted for neonates

### **USUAL DOSE:**

- 1 mEq/kg

### **ROUTE:** IV, IO

### **MONITOR, REPORT, DOCUMENT:**

- Changes in level of consciousness
- ECG changes
- Vital signs within 5 minutes after administration

## **DRUG PROFILE**

The following is the basic information and guideline for use of:

# **Succinylcholine**

|                      |      |     |      |      |
|----------------------|------|-----|------|------|
| Approved for use by: | FRLS | BLS | AEMT | EMTP |
|                      |      |     |      | XX*  |

**\* EMTP level only with RSI capabilities**

### **DRUG ACTION:**

- Short acting Depolarizing neuromuscular blocking drug (3-10 minutes)

### **INDICATIONS FOR USE:**

- Used in Rapid sequence intubation

### **CONTRAINDICATIONS:**

- Allergy to the drug
- Long bone fractures
- Patient or family history of malignant hyperthermia
- Narrow angle glaucoma or eye injuries
- Patients with liver disease, anemia, malnutrition
- Use with caution with patients with Cardiovascular disease, pulmonary, renal, or metabolic diseases
- Use with great caution in patients with Burns, electrolyte imbalances, those patients receiving quinidine

### **SIDE EFFECTS:**

- Skeletal muscle paralysis
- Muscle fasciculations ( 1/10 dose of vecuronium will reduce fasciculation if given prior to Succs)
- Bradycardia
- Tachycardia
- Hypertension
- Hypotension
- Arrhythmias
- Cardiac arrest
- Fever
- Muscle rigidity

### **SPECIAL NOTES:**

- Short acting paralytic
- Keep refrigerated or shelf life is only 90 days

### **USUAL DOSE:**

- Adult dose 1 mg/kg; Usually 100-200mg
- Child dose 2 mg/kg

**ROUTE:** IV, IO

### **MONITOR, REPORT, DOCUMENT:**

- Monitor and assist airway and breathing
- Continuous End-tidal CO<sub>2</sub>, pulse ox, ECG monitoring

## **DRUG PROFILE**

The following is the basic information and guideline for use of:

# **Vecuronium Bromide (Norcuron)**

|                      |      |     |      |      |
|----------------------|------|-----|------|------|
| Approved for use by: | FRLS | BLS | AEMT | EMTP |
|                      |      |     |      | XX*  |

**\*EMTP level only with RSI capabilities**

### **DRUG ACTION:**

- Long lasting Non-depolarizing neuromuscular blocking drug

### **INDICATIONS FOR USE:**

- Used in Rapid sequence intubation

### **CONTRAINDICATIONS:**

- Allergy to the drug
- Obesity
- Patient is not a candidate for easy intubation
- Patients with Myasthenia gravis or Eaton-Lambert syndrome may experience profound effects with small doses

### **SIDE EFFECTS:**

- Skeletal muscle paralysis
- Muscle rigidity

### **SPECIAL NOTES:**

- Long lasting paralytic (30-45 minutes)
- Needs to be reconstituted with 10cc of water

### **USUAL DOSE:**

- Adult/Pediatric dose: 0.1 mg/kg

### **ROUTE:** IV, IO

### **MONITOR, REPORT, DOCUMENT:**

- Monitor and assist airway and breathing
- Continuous End-tidal CO<sub>2</sub>, pulse ox, and ECG monitoring
- Constant review of airway patency

## **DRUG PROFILE**

The following is the basic information and guideline for use of:

# **VERSED (Midazolam)**

|                      |      |     |      |      |
|----------------------|------|-----|------|------|
| Approved for use by: | FRLS | BLS | AEMT | EMTP |
|                      |      |     |      | XX   |

### **DRUG ACTION:**

- Central nervous system depressant

### **INDICATIONS FOR USE:**

- Sedation for patients prior to intubation and cardioversion

### **CONTRAINDICATIONS:**

- Allergy to the drug
- Hypotension

### **SIDE EFFECTS:**

- Hypotension, respiratory depression, bradycardia, disinhibition resulting in agitation

### **SPECIAL NOTES:**

- Always have advanced airway equipment ready prior to use. Always preoxygenate prior to use.

### **USUAL DOSE:**

- Administer at a dose not greater than 2.5 mg IVP slowly. Repeat every 3 min titrating to desired affect. Maximum dose of 10 mg.
- Pediatric dose: 0.05 to 0.1mg/kg, maximum 2.5mg IV

**ROUTE:** IV, IO, IM, IN

### **MONITOR, REPORT, DOCUMENT:**

- Continuous ECG and Oxygen Saturation monitoring.
- Vital signs before and within 5 minutes after administration.