

ACETAMINOPHEN

(Tylenol)

Trinity EMS Protocols:

- 1 07 Fever/Infection Control
- 1 10 Pain Control (Pediatric)

Indications:

- Pain and fever control
- Analgesic and antipyretic

Contraindications:

Avoid in patients with liver disease or chronic alcohol use

Adult Dosages:

• 650 mg to 1000 mg po

Pediatric Dosages:

See color-coded list

• 15 mg/kg po

Side effects:

- Hepatotoxicity
- Nausea
- Rash
- Headache



ADENOSINE

(Adenocard)

Trinity EMS Protocols:

- 3 02 Atrial Fibrillation
- 3 12 Supraventricular Tachycardia
- 4 11 Pediatric Supraventricular Tachycardia

Indications:

Specifically for treatment/diagnosis of SVT

Contraindications:

- 2ND OR 3rd degree AV block without pacemaker
- Acute bronchospasm
- Caution with severe COPD

Adult Dosages:

- 6 mg IV push over 1-3 seconds
- If no effect after 1-2 minutes, repeat with 12 mg IV push over 1-3 seconds
- Repeat 12 mg once if necessary
- Use stopcock and 10 ml Normal Saline flush with each dose

Pediatric Dosages:

- 0.1 mg/kg IV (Max 6 mg) push over 1-3 seconds.
- If no effect after 1-2 minutes, repeat with 0.2 mg/kg IV (Max 12 mg) push over 1-3 seconds
- Use stopcock and 5 ml Normal Saline flush with each dose

Side effects(Serious):

- Severe bradycardia
- Ventricular fibrillation/tachycardia
- Atrial fibrillation
- Asystole
- Complete heart block
- Bronchospasm

Common:

- Flushing
- Dyspnea
- Chest pressure
- Nausea
- Lightheaded
- Headache



ALBUTEROL

Trinity EMS Protocols:

- 2 09 Respiratory Distress
- 4 09 Pediatric Respiratory Distress
- 5 04 Crush Syndrome
- 5 05 Drowning

Indications:

Beta-agonist used for treatment of bronchospasm

Contraindications:

Caution with ischemic heart disease, arrhythmias, hypokalemia

Adult Dosages:

 2.5 mg in nebulizer up to 3 doses if no history of cardiac disease and heart rate ≤ 150

Pediatric Dosages:

See color-coded list

 2.5 mg (3ml) in nebulizer up to 3 doses continuously if no history of cardiac disease and heart rate
 < 200

Side effects(Serious):

- Hypertension
- Angina/Myocardial Infarction
- Hypokalemia
- Arrhythmias

Common:

- Tremor
- Nervousness
- Headache
- Nausea
- Tachycardia
- Muscle Cramps
- Palpitations
- Dizziness



AMIODARONE (Cordarone)

Trinity EMS Protocols:

- 3 15 Ventricular Fibrillation/Pulseless Ventricular Tachycardia
- 3 16 Wide Complex Tachycardia
- 4 08 Pediatric Pulseless Arrest

Indications:

Antiarrhythmic used in ventricular dysrhythmias(Class 3)

Contraindications:

Avoid in patients with 2nd or 3rd degree heart block or profound bradycardia

Adult Dosages:

Vfib/Pulseless Vtach:

- 300 mg IV push, diluted in 20 ml NS
- Repeat dose of 150 mg IV push for recurrent episodes

Wide complex tachycardia:

150 mg in 100 ml D5W over 10 minutes

Pediatric Dosages:

Vfib/Pulseless Vtach:

 5 mg/kg IV/IO push over 5 minutes, diluted in 20 ml NS; may repeat one dose; Maximum dose 300 mg

Wide complex tachycardia:

- 5 mg/kg IV/IO in 100 ml D5W over 10 minutes
- Avoid in <6 month/Pink

Use Trinity EMS Standardized Medication Delivery Table

Side effects(Serious):

- Severe bradycardia
- Torsades de pointes
- CHF
- Hypotension/shock

Common:

- Tremor
- Ataxia
- Nausea/vomiting
- Dizziness
- Ventricular Tachycardia
- Bradycardia



ASPIRIN

Trinity EMS Protocols:

- 2 08 Pulmonary Edema
- 3 05 Chest Pain/STEMI

Indications:

- An antiplatelet drug for use in cardiac chest pain/stroke
- Analgesic, anti-inflammatory, and antipyretic effects

Contraindications:

- Allergy or hypersensitivity
- NSAID-induced asthma or urticaria
- GI bleeding or coagulopathy

Adult Dosages:

- 81 mg chewable (baby) Aspirin. Give
 4 tablets equal to usual adult dosage
 and chew tablets
- 162-324 mg po chewed

Pediatric Dosages:



Side effects(Serious):

- Anaphylaxis
- Angioedema
- Bronchospasm
- Bleeding

Common:

- Dyspepsia
- Nausea/vomiting
- Rash
- Dizziness



ATROPINE

Trinity EMS Protocols:

- 2 07 Overdose/Toxicity
- 3 03 Bradycardia
- 4 04 Pediatric Bradycardia

Indications:

- Anticholinergic drug used in bradycardias
- Antagonizes acetylcholine receptors in organophosphate poisonings

Contraindications:

• Caution in asthma, paralytic ileus, myasthenia gravis, and the elderly

Adult Dosages:

Bradycardia:

 0.5 mg - 1 mg IV/IO every 3-5 minutes up to 3 mg

Organophosphate:

- 1 2 mg IM or IV/IO, otherwise per Medical Control
- In organophosphate toxicity, large doses may be required (> 10 mg)

Pediatric Dosages:

See color-coded list

Bradycardia:

- 0.02 mg/kg IV or IO (max 1 mg per dose)
- Minimum 0.1 mg per dose

Organophosphate:

 0.02 mg/kg IM or IV/IO (otherwise per Medical Control)

Side effects:

- Severe bradycardia
- Headache
- Dry mouth
- Nausea

- Tachycardia
- Palpitations
- Ataxia
- Tremor



CALCIUM CHLORIDE

Trinity EMS Protocols:

- 2 07 Overdose/Toxicity
- 3 03 Bradycardia
- 3 10 Pulseless Electrical Activity
- 4 04 Pediatric Bradycardia
- 5 04 Crush Syndrome

Indications:

• Indicated for severe hyperkalemia and calcium channel blocker overdose

Contraindications/Cautions:

- Digoxin toxicity
- Hypercalcemia
- Irritating to veins and toxic to tissue

Adult Dosages:

• One amp (10 ml) or 1 gram IV/IO

Pediatric Dosages:

See color-coded list

• 20 mg/kg IV/IO slowly

Side effects(Serious):

- Arrhythmias
- Syncope
- Extravasation necrosis

Common:

- Hypotension
- Bradycardia
- Vasodilation/flushing
- Dizziness
- Nausea



DEXTROSE 25% GLUCOSE SOLUTION

Trinity EMS Protocols:

- 1 06 Behavioral
- 1 13 Universal Patient Care
- 2 03 Altered Mental Status
- 2 11 Vomiting & Diarrhea
- 3 11 Suspected Stroke
- 4 04 Pediatric Bradycardia

- 4 05 Pediatric Head Trauma
- 4 06 Pediatric Hypotension
- 4 08 Pediatric Pulseless Arrest
- 4 10 Pediatric Seizure
- 5 09 Hypothermia

Indications:

• Use in unconscious/confused states or hypoglycemic states

Contraindications:

- Intracranial hemorrhage
- Severe dehydration

Adult Dosages:



Pediatric Dosages:

See color-coded list

- 2-4 ml/kg IV or IO starting at low dose
- Repeat based on blood glucose results

Side effects:

- Phlebitis and thrombosis
- Hyperglycemia
- Pulmonary edema



DEXTROSE 50% GLUCOSE SOLUTION

Trinity EMS Protocols:

- 1 06 Behavioral
- 1 13 Universal Patient Care
- 2 03 Altered Mental Status
- 2 10 Seizure
- 2 11 Vomiting & Diarrhea
- 3 10 Pulseless Electrical Activity

- 3 11 Suspected Stroke
- 3 13 Syncope
- 4 − 02 Newly Born
- 4 03 Obstetrical Emergency
- 5 07 Head Trauma
- 5 09 Hypothermia

Indications:

Use in unconscious/confused states or hypoglycemia

Contraindications:

- Intracranial hemorrhage
- Severe dehydration

Adult Dosages:

- One amp or 25 grams IV bolus
- Repeat based on blood glucose results

Pediatric Dosages:

D10 (one ml of D50 with 4 ml
 Normal Saline) for treatment in
 Neonates <3 months/White

Side Effects:

- Phlebitis and thrombosis
- Hyperglycemia
- Pulmonary edema



DIAZEPAM

(Valium)

Trinity EMS Protocols:

- 1 − 01 Airway, Adult
- 1 03 Airway, Pediatric
- 1 06 Behavioral
- 2 10 Seizure
- 3 02 Atrial Fibrillation
- 3 08 Induced Hypothermia

- 3 12 Supraventricular Tachycardia
- 3 16 Wide Complex Tachycardia
- 4 03 Obstetrical Emergency
- 4 10 Pediatric Seizures
- 4 11 Pediatric SVT

Indications:

Used for control of seizures, anxiety, alcohol withdrawal, and sedation

Contraindications:

Watch for respiratory depression and hypotension

Adult Dosages:

- 2 10 mg IV/IO
- 5 10 mg PR
- May repeat every 5 minutes
- May be administered rectally
- Max dose 20 mg
- Recommended doses are 5 mg for seizures and 2 mg for sedation

Pediatric Dosages:

- 0.2 mg/kg IV/IO
- 0.5 mg/kg PR
- May repeat every 5 minutes
- Maximum 3 doses

Side effects:

- Drowsiness
- Ataxia
- Confusion
- Hypotension
- Bradycardia



DIPHENHYDRAMINE

(Benadryl)

Trinity EMS Protocols:

• 2 – 02 Allergic Reaction

Indications:

Antihistamine used in the treatment of allergic reactions and vertigo

Contraindications:

- Infants < 3 months old
- Caution in the elderly and hypotensive states

Adult Dosages:

• 25-50 mg IV/IM/PO

Pediatric Dosages:

See color-coded list

- 1-2 mg/kg IV/IO/IM
- Do not give in infants <3 months
- Max dose 50 mg

Side effects:

- Arrhythmias
- Seizures
- Drowsiness
- Dizziness
- Dry Mucous Membranes

- Urinary Retention
- Hypotension
- Palpitations
- Tachycardia
- Blurred Vision



DOPAMINE

(Intropin)

Trinity EMS Protocols:

- 3 03 Bradycardia
- 3 07 Hypotension
- 3 09 Post-Resuscitation
- 3 10 Pulseless Electrical Activity (PEA)
- 4 06 Pediatric Hypotension

Indications:

A vasopressor used in shock or hypotensive states

Contraindications/Cautions:

- Caution with MAO-inhibitors
- Caution with Peripheral Arterial Disease

Adult Dosages:

- 2-20 micrograms/kg/min IV/IO titrated to keep BP systolic of >90 mmHg
- 2-20 micrograms/kg/min IV/IO titrated to maintain a mean arterial pressure (MAP) of 90-100 mmHg post-cardiac arrest
- Recommended doses are 5, 10 and 20 mcg/kg/min

Pediatric Dosages:

See color-coded list

 2-20 micrograms/kg/min IV/IO titrated to BP systolic appropriate for age

Side effects(Serious):

- Anaphylaxis
- Asthma Exacerbation
- Extravasation Necrosis
- Gangrene

- Hypotension
- Tachycardia
- Headache
- Nausea/Vomiting
- Conduction Abnormalities
- Vasoconstriction



DUODOTE

(Atropine/Pralidoxime)

Trinity EMS Protocols:

2 – 07 Overdose/Toxicity

Indications:

Used in Organophosphorous insecticide/chemical nerve agent poisonings

Contraindications:

• None if Life-threatening situation

Adult Dosages:

- One Auto-Injector IM in mid-lateral thigh
- May administer up to three for severe symptoms

Pediatric Dosages:

- One Auto-Injector IM in mid-lateral thigh for severe symptoms
- Use only for patients > 40 kg unless directed by Medical Control in nonlife threatening situations

Side effects(Serious):

- Ataxia
- Delirium/Hallucinations
- Arrhythmias
- Syncope
- Laryngospasm
- Myocardial Infarction

Common:

- Dry Mouth
- Confusion
- Headache
- Tachycardia
- Flushing
- Hypertension



DuoNeb®

(Albuterol/Ipratropium)

Trinity EMS Protocols:

- 2 09 Respiratory Distress
- 4 09 Pediatric Respiratory Distress

Indications:

- Medication containing Albuterol and Ipratropium to assist patients with asthma and COPD
- Administer only one treatment, usually first, in patients with bronchospasm or obstructive lung disease

Contraindications/Cautions:

- Hypersensitivity/Allergy to drug
- Age less than 1 year/12 months or less than 10 kg

Adult Dosages:

3 mg Albuterol + 500 mcg
 Ipratropium per nebulizer treatment
 in 3 ml unit dose

Pediatric Dosages:

• 3 mg Albuterol + 500 mcg Ipratropium per nebulizer treatment in 3 ml unit dose

Side effects(Serious):

- Anaphylaxis
- Angioedema
- Laryngospasm
- Paradoxical Bronchospasm

Common:

- Cough
- Dry Mouth
- Dizziness
- Rash/Urticaria



EPINEPHRINE

1:1,000

Trinity EMS Protocols:

- 2 02 Allergic Reaction
- 2 09 Respiratory Distress
- 4 09 Pediatric Respiratory Distress

Indications:

Vasopressor used in allergic reactions, severe asthma, or anaphylaxis

Contraindications/Cautions:

- Labor and Delivery
- Cardiac Disease
- Hypertension
- Elderly Patients

Adult Dosages:

- 0.3 mg IM (if age <50 years)
- 0.15 mg IM (if age >50 years)
- EpiPen Auto-Injector (may repeat one time for severe symptoms)

Nebulized Epinephrine

 2 mg (2ml) mixed with 1 ml of Normal Saline

Pediatric Dosages:

See color-coded list

- 0.01 mg/kg IM
- Max dose 0.3 mg
- EpiPen Jr Auto-Injector for patients 15-33 kg (may repeat one time for severe symptoms)

Nebulized Epinephrine

• 2 mg (2ml) mixed with 1 ml of Normal Saline

Side effects(Serious):

- Pulmonary Edema
- Arrhythmias
- Hypertension
- Angina
- Cerebral Hemorrhage
- Tissue Necrosis

Common:

- Tachycardia
- Nausea/vomiting
- Sweating
- Dizziness
- Tremor
- Anxiety



EPINEPHRINE

1:10,000

Trinity EMS Protocols:

- 3 01 Asystole
- 3 10 Pulseless Electrical Activity
- 3 14 VFib/Pulseless VTach
- 4 04 Pediatric Bradycardia
- 4 08 Pediatric Pulseless Arrest

Indications:

Vasopressor used in cardiac arrest

Contraindications/Cautions:

- Labor and Delivery
- Cardiac Disease
- Hypertension
- Elderly Patients

Adult Dosages:

- 1 mg IV/IO (pulseless)
- May be repeated every 3-5 minutes

Pediatric Dosages:

See color-coded list

- 0.01 mg/kg IV or IO
- Max dose 0.5 mg
- Repeat every 3-5 minutes until response observed

Side effects(Serious):

- Pulmonary Edema
- Arrhythmias
- Hypertension
- Angina
- Cerebral Hemorrhage
- Tissue Necrosis

Common:

- Tachycardia
- Nausea/vomiting
- Sweating
- Dizziness
- Tremor
- Anxiety



ETOMIDATE (Amidate)

Trinity EMS Protocols:

- 3 08 Induced Hypothermia
- XX Rapid sequence Intubation Procedure

Indications:

- Hypnotic used in shivering patient being resuscitated from cardiac arrest
- Rapid Sequence Intubation (RSI)

Contraindications/Cautions:

Elderly patients

Adult Dosages:

• 20 mg IV/IO

Pediatric Dosages:

Use Trinity EMS Standardized Medication Delivery Table

0.3 mg/kg IV/IO up to max dose of 20 mg

Side effects:

- Shock
- Transient Myoclonic Jerks
- Nausea/Vomiting
- Apnea



FENTANYL

(Sublimaze)

Trinity EMS Protocols:

- 1 09 Pain Control: Adult
- 1 10 Pain Control: Pediatric
- 2 08 Pulmonary Edema
- 3 02 Atrial Fibrillation

- 3 05 Chest Pain and STEMI
- 3 12 Supraventricular Tachycardia
- 3 16 Wide Complex Tachycardia

Indications:

- Binds opioid receptors producing analgesia and sedation
- Rapid induction of pain relief

Contraindications/Cautions:

- Elderly patients
- Hypotension

Adult Dosages:

- 25-75 mcg IM/IV/IO bolus, then repeat 50 mcg IM/IV/IO every 10-12 minutes until a maximum of 200 mcg or clinical improvement
- 50-100 mcg IN/intranasal per Intranasal Medication Administration (may repeat x1)

Pediatric Dosages:

See color-coded list

- 1 mcg/kg IM/IV/IO single bolus only
- 50 mcg maximum dose
- 2 mcg/kg intranasal single dose only

Side effects(Serious):

- Respiratory Depression/Arrest
- Hypotension
- Bradycardia
- Laryngospasm
- Severe Muscle Rigidity
- Increased ICP
- Delirium

Common:

- Somnolence
- Nausea/Vomiting
- Confusion
- Dizziness
- Euphoria
- Hallucinations
- Pruritus



GLUCAGON

Trinity EMS Protocols:

- 1 06 Behavioral
- 1 13 Universal Patient Care
- 2 03 Altered Mental Status
- 2 10 Seizure
- 2 11 Vomiting & Diarrhea
- 3 03 Bradycardia
- 3 10 Pulseless Electrical Activity
- 3 11 Suspected Stroke

- 3 13 Syncope
- 4 03 Obstetrical Emergency
- 4 04 Pediatric Bradycardia
- 4 05 Pediatric Head Trauma
- 4 06 Pediatric Hypotension
- 4 10 Pediatric Seizure
- 5 07 Head Trauma
- 5 09 Hypothermia

Indications:

- Drug acting to release glucose into blood stream by glycogen breakdown
- Use in patients with no IV access
- May be used for smooth muscle relaxation with food bolus
- Beta-blocker overdose

Contraindications:

Caution with insulinoma/pheochromocytoma/starvation

Adult Dosages:

- 1-2 mg IM/IV/IO
- Follow up blood glucose determination in 15 minutes. If glucose <60, repeat dose

Pediatric Dosages:

See color-coded list

- 0.03 mg/kg IV/IM up to 1 mg
- Follow up blood glucose determination in 15 minutes. If glucose <60, repeat dose

Side effects:

- Nausea/Vomiting
- Urticaria/Rash



LIDOCAINE

Trinity EMS Protocols:

- 3 15 VFib/Pulseless VT (Persistent)
- 3 16 Wide Complex Tachycardia
- 4 08 Pediatric Pulseless Arrest
- 5 07 Head Trauma
- X Intraosseous Procedure

Indications:

- Anesthetic used during invasive airway management that may reduce elevated intracranial pressures during procedures
- Injectable anesthetic used to reduce pain associated with pressure infusion of fluids into marrow space
- Antiarrhythmic (Class IB) which inhibits Na ion channels

Contraindications/Cautions:

• Caution with WPW syndrome, Heart Block, CHF, Bradycardia or Shock

Adult Dosages:

- 100 mg IV
- RSI premedication: 100 mg IV/IO
- IO Anesthesia: 10 20 mg IO slowly
- Vtach/Persistent VT/VF: 1 1.5 mg/kg IV/IO and may repeat 0.5 0.75 mg/kg after 5 minutes
- Maximum dose 3 mg/kg

Pediatric Dosages:

See color-coded drug list

- IO Anesthesia: 0.2 mg/kg IO slowly
- Vtach/Persistent VT/VF: 1 1.5 mg/kg IV/IO and may repeat 0.5 0.75 mg/kg after 5 minutes
- Maximum dose 3 mg/kg

Side effects(Serious):

- Seizures
- Heart Block
- Bradycardia
- Respiratory Arrest
- Status Asthmaticus

Common:

- Confusion
- Hypotension
- Dizziness
- Nausea/Vomiting
- Agitation
- Hallucinations



LORAZEPAM

(Ativan)

Trinity EMS Protocols:

- 1 − 01 Airway, Adult
- 1 − 03 Airway, Pediatric
- 1 06 Behavioral
- 2 10 Seizure
- 3 02 Atrial Fibrillation

- 3 08 Induced Hypothermia
- 3 12 Supraventricular Tachycardia
- 3 16 Wide Complex Tachycardia
- 4 03 Obstetrical Emergency
- 4 10 Pediatric Seizure
- 4 11 Pediatric SVT

Indications:

- Anxiolytic used for sedation and seizures
- Benzodiazepine
- May be given and effective IM

Contraindications:

May cause hypotension and respiratory depression

Adult Dosages:

- 0.5 2 mg IV/IO
- 2 4 mg IM
- May repeat q 5 minutes for total of three doses

Pediatric Dosages:

- 0.05-0.1 mg/kg IV/IO
- 0.1 mg/kg IM
- May repeat q 5 minutes for total of three doses

Side effects(Serious):

- Respiratory Depression
- Hypotension
- Syncope
- Paradoxical CNS Stimulation

Common:

- Sedation
- Dizziness
- Ataxia
- Confusion
- Dystonia



MAGNESIUM SULFATE

Trinity EMS Protocols:

- 3 15 Ventricular Fibrillation/Ventricular Tachycardia (Persistent)
- 3 16 Wide Complex Tachycardia
- 4 03 Obstetrical Emergency

Indications:

- Use in treating Torsades de Pointes/Polymorphic VT
- Treatment of Preeclampsia/Eclampsia

Contraindications:

Diabetic Coma or Heart Block

Adult Dosages:

- Cardiac dosing: 1-2 gm IV/IO, may repeat after 5 minutes for persistent Polymorphic VT
- Obstetrical Emergency: 4 gm in 250 ml NS bag infused over 30 minutes

Pediatric Dosages:

 Cardiac dosing: 25 – 50 mg/kg IV/IO, max 2 gm/dose, may repeat after 5 minutes for persistent Polymorphic VT

Side effects(Serious):

- Cardiovascular Collapse
- Pulmonary Edema
- Respiratory Paralysis
- Hypothermia

Common:

- Hypotension
- Flushing
- Drowsiness
- Diaphoresis
- Diminished reflexes



METHYLPREDNISOLONE

(Solumedrol)

Trinity EMS Protocols:

- 2 02 Allergic Reaction
- 2 09 Respiratory Distress

Indications:

• Steroid used in respiratory distress and allergic reactions

Contraindications/Cautions:

Caution in severe active infections

Adult Dosages:

• 125 mg IV/IO

Pediatric Dosages:

See color-coded drug list

• 2 mg/kg IV/IO

Side effects:

- Diaphoresis
- Nervousness
- Hypertension
- Hyperglycemia
- Urticaria



MIDAZOLAM

(Versed)

Trinity EMS Protocols:

- 1 − 01 Airway, Adult
- 1 − 03 Airway, Pediatric
- 1 06 Behavioral
- 2 10 Seizure
- 3 02 Atrial Fibrillation

- 3 08 Induced Hypothermia
- 3 12 Supraventricular Tachycardia
- 3 16 Wide Complex Tachycardia
- 4 03 Obstetrical Emergency
- 4 10 Pediatric Seizure
- 4 11 Pediatric SVT

Indications:

- Used for sedation and to control seizures
- Quick-acting and may be given Intranasal or IM

Contraindications:

May cause significant Respiratory Depression and Hypotension

Adult Dosages:

- 2-5 mg IV/IO slowly over 2-3 minutes. May slowly titrate dose up to 5 mg if needed. Usual total dose: 2-5 mg.
- 5 mg intranasal using atomizer.
 Usual total dose: 5 mg
- IM dosage: 5 mg

Pediatric Dosages:

Use Trinity EMS System Standardized Medication Delivery tables

- 0.15 0.2 mg/kg IV/IO for seizures
- 0.05-0.1 mg/kg IV/IO slowly over 2-3 minutes (max 5 mg/dose) for sedation
- 0.2 mg/kg IM for seizures
- 0.2 mg/kg intra-nasal/IN for seizure control

Side effects(Serious):

- Respiratory Depression/Apnea
- Hypotension
- Bradycardia

Common:

- Nausea/Vomiting
- Amnesia
- Confusion



MORPHINE SULFATE

Trinity EMS Protocols:

- 1 09 Pain Control: Adult
- 1 10 Pain Control: Pediatric
- 2 08 Pulmonary Edema
- 3 02 Atrial Fibrillation

- 3 05 Chest Pain and STEMI
- 3 08 Induced Hypothermia
- 3 12 Supraventricular Tachycardia
- 3 16 Wide Complex Tachycardia

Indications:

- Narcotic pain relief
- Anti-anxiety

Contraindications/Cautions:

- Avoid use if SBP < 100
- Caution with CNS depression or Respiratory Compromise

Adult Dosages:

- 2 6 mg IV/IO, repeat every 5-10 minutes until a max of 20 mg or clinical improvement
- 5 − 10 mg IM single dose only
- If the patient has suffered burns that require prolonged transport, maximum total dose is 40 mg

Pediatric Dosages:

See color-coded list

- 0.1 mg/kg IV/IO(max 5 mg), may repeat after 5 minutes
- 0.2 mg/kg IM single dose only

Side effects(Serious):

- Respiratory Depression/Apnea
- Hypotension
- Bradycardia
- Seizures

Common:

- Somnolence
- Nausea/Vomiting
- Dizziness
- Pruritus
- Dysphoria/Euphoria



NALOXONE

(Narcan)

Trinity EMS Protocols:

- 2 03 Altered Mental Status
- 2 07 Overdose/Toxicity
- 3 10 Pulseless Electrical Activity
- 4 02 Newly Born
- 4 04 Pediatric Bradycardia
- 5 07 Head Trauma
- 5 09 Hypothermia

Indications:

- Narcotic antagonist
- Anticipate rapid withdrawal or agitation after administration

Contraindications:

- Anticipate rapid withdrawal, delirium, or agitation after administration
- Use with caution in chronic pain/chronic opiate usage(i.e. cancer, hospice)

Adult Dosages:

- 0.4 2 mg IV/IO bolus titrated to patient's respiratory response
- May be given IM or IN if unable to establish IV in a known or suspected narcotic overdose
- The lowest dose required for patient to protect their airway should be utilized
- Dosing may be repeated at 5 minute intervals without maximum as necessary to maintain protection of the airway

Pediatric Dosages:

See color-coded list

- 0.1 mg/kg IV or IO (max 2 mg)
- May be given IM or IN if unable to establish IV or IO in a known or suspected narcotic overdose
- The lowest dose required for patient to protect their airway should be utilized
- Dosing may be repeated at 5 minute intervals without maximum as necessary to maintain protection of the airway

Side effects:

- Cardiac Arrest
- Seizures
- Tachycardia

- Hypertension
- Nausea/Vomiting
- Withdrawal from Opiates
- Diaphoresis



NITROGLYCERIN

(Nitrostat)

Trinity EMS Protocols:

- 2 08 Pulmonary Edema
- 3 05 Chest Pain and STEMI
- 3 06 Hypertension

Indications:

Vasodilator used in anginal syndromes, CHF, and hypertension

Contraindications/Cautions:

- Do not use in those <30 years old without a history of heart disease with Chest Pain and SBP <180
- Avoid with increased ICP, Erectile Dysfunction medications, or hypotension

Adult Dosages:

Chest Pain

- 1 tablet 0.4 mg SL every 5 minutes until pain free or 3 doses
- If SBP <100, contact Medical Control before administration

Pulmonary Edema

- 1 tablet SL every 1-2 minutes if BP >110 systolic
- If SBP <100, contact Medical Control before administration
- MAP should not be decreased more than 30%

Hypertension

- 1 tablet SL every 1-2 minutes until Diastolic BP
 <110
- MAP should not be decreased more than 30%

Side effects:

- Hypotension
- Headache

Pediatric Dosages:



- Flushing
- Tachycardia
- Dizziness/Lightheaded



NORMAL SALINE

Trinity EMS Protocols:

- 1 05 Back Pain
- 1 07 Fever/Infection control
- 2 01 Abdominal Pain
- 2 03 Altered Mental Status
- 2 06 Epistaxis
- 2 11 Vomiting & Diarrhea
- 3 02 Atrial Fibrillation
- 3 03 Bradycardia
- 3 07 Hypotension
- 3 09 Post-Resuscitation

- 3 10 Pulseless Electrical Activity
- 4 02 Newly Born
- 4 03 Obstetrical Emergencies
- 4 04 Pediatric Bradycardia
- 4 06 Pediatric Hypotension
- 4 07 Pediatric Multiple Trauma
- 5 02 Burns: Chemical & Electrical
- 5 03 Burns: Thermal
- 5 04 Crush Syndrome
- 5 08 Hyperthermia
- 5 10 Multi-System Trauma
- 5 12 Traumatic Arrest

Indications:

The IV fluid of choice for access or volume infusion

Contraindications/Cautions:

• Caution in fluid overloaded states(i.e. CHF, Renal Failure, Cirrhosis)

Adult Dosages:

- KVO for IV access
- Bolus in 250 500 ml for cardiac care
- Bolus in 500 1000 ml for volume infusions
- Bolus in 1000 ml amount for burns or electrical injuries. See Burn Protocol or Reference Materials for IV rates

Pediatric Dosages:

See color-coded list

- KVO for IV or IO access
- Bolus in 20 ml/kg for volume (may be repeated x3)
- See Burn Protocol or Reference Materials for IV rates

Side effects:

• Fluid Overload(Edema, CHF)



ONDANSETRON

(Zofran)

Trinity EMS Protocols:

- 2 01 Abdominal Pain
- 2 11 Vomiting & Diarrhea
- 3 05 Chest Pain and STEMI

Indications:

- Anti-emetic used to control nausea and/or vomiting
- Ondansetron is the recommended anti-emetic for EMS since it is associated with significantly fewer side effects and sedation

Contraindications/Cautions:

Caution with Prolonged QT

Adult Dosages:

- 2 4 mg IV/IO
- 4 mg ODT po

Pediatric Dosages:

• 0.15 mg/kg IV/IO (max 4 mg) for ages >1 year

Side effects:

- QT prolongation
- Torsades de Pointes
- Urinary Retention
- Dizziness
- Extrapyramidal Symptoms



OXYGEN

Trinity EMS Protocols:

- 1 − 01 Airway, Adult
- 1 02 Airway, Adult- Failed
- 1 − 03 Airway, Pediatric
- 1 04 Airway, Pediatric- Failed

- 1 13 Universal Patient Care
- 3 09 Post-Resuscitation
- 4 − 02 Newly Born
- 4 09 Pediatric Respiratory Distress
- 5 04 Crush Syndrome

Indications:

- Useful in any condition with increased cardiac work load, respiratory distress, or illness or injury resulting in altered ventilation and/or perfusion
- Required for pre-oxygenation whenever possible prior to intubation
- Ideal oxygen saturations are 94-99%

Contraindications:

Avoid excessive oxygenation in newborns and COPD

Adult Dosages:

- 1 4 liters/min via nasal cannula
- 6 15 liters/min by NRB mask
- 10 15 liters/min via BVM (sufficient to allow reservoir bag to completely refill during ventilations)

Pediatric Dosages:

- 1 4 liters/min via nasal cannula
- 6 16 liters/min per NRB mask
- 10 15 liters/min via BVM (sufficient to allow reservoir bag to completely refill between ventilations)

Side effects:

- Bradypnea/Decreased Respiratory Drive
- Nausea
- Euphoria/Dysphoria



ROCURONIUM

(Zemuron)

Trinity EMS Protocols:

- 3 08 Induced Hypothermia
- XX Rapid Sequence Intubation Procedure

Indications:

Non-depolarizing paralytic agent used in RSI or Induced Hypothermia

Contraindications:

Avoid in patient with chronic neuromuscular disease

Adult Dosages:

- 0.6 1.2 mg/kg IV/IO to a max of 100 mg.
 IF inadequate relaxation after 5 minutes, may repeat dose
- May refer to Trinity EMS System
 Standardized Medication Delivery Table
- Onset <1 minute
- Duration ~45 minutes

Pediatric Dosages:

- 0.6 1 mg/kg IV/IO to a max of 100mg
- Only for use in RSI for ages ≥ 9 yo

Side effects:

- Prolonged Paralysis
- Apnea
- Bronchospasm
- Arrhythmias
- Hypotension, transient



SODIUM BICARBONATE

Trinity EMS Protocols:

- 2 07 Overdose/Toxicity
- 3 10 Pulseless Electrical Activity (PEA)
- 3 14 Ventricular Fibrillation/Pulseless Ventricular Tachycardia
- 5 04 Crush Syndrome

Indications:

 A buffer used in acidosis to increase the pH in cardiac arrest, hyperkalemia, or overdoses

Contraindications:

Caution in known alkalosis

Adult Dosages:

- One amp (50 mEq) IV/IO
- May repeat every 5 minutes for maximum of three doses

Pediatric Dosages:

See color-coded drug list

- 1 mEq/kg IV/IO
- May repeat every 5 minutes for a maximum of three doses

Side effects:

- Seizures
- Tetany
- Extravasation cellulitis
- Edema
- Phlebitis



SUCCINYLCHOLINE

Trinity EMS Protocols:

• XX - Rapid Sequence Intubation

Indications:

Depolarizing paralytic for Medication Assisted/ Rapid Sequence Intubations

Contraindications:

 Avoid in states of hyperkamemia, burns older than 24 hours, muscular dystrophies, dialysis patients

Adult Dosages:

- 1.5 mg/kg IV/IO
- 1.5 mg/kg IM (onset of action may be delayed)
- May refer to Trinity Ems System Standardized Medication Delivery Table

Pediatric Dosages:

See color-coded list

- 1-2 mg/kg IV/IO
- Consider administration of atropine to blunt bradycardia with intubation in pediatric population
- RSI only in ages >8 years

Side effects:

- Prolonged Paralysis
- Apnea
- Arrhythmias
- Muscle Fasciculations
- ICP elevation