

#### **Approved by EMS Medical Director 2024**

# ABDOMINAL PAIN MEDICAL PROTOCOL # 2 - 01

#### HISTORY

- ✓ Age
- √ Past medical /surgical history
- ✓ Medications
- ✓ Onset
- ✓ Palliation/Provocation
- ✓ Quality (crampy, dull, sharp, etc.)
- ✓ Region, Radiation, Referred
- √ Severity (1-10)
- √ Time (duration/repetition)
- ✓ Fever
- ✓ Last meal eaten
- ✓ Last bowel movement/emesis
- Menstrual history (pregnancy)

#### SIGNS AND SYMPTOMS

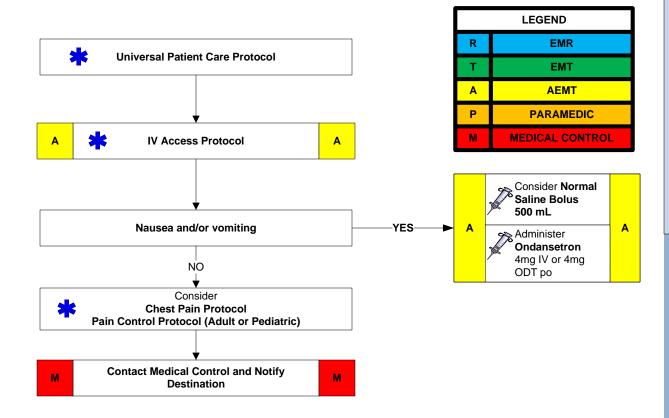
- ✓ Pain (location/migration)
- Tenderness
- ✓ Nausea
- ✓ Vomiting
- ✓ Diarrhea
- ✓ Dysuria
- ✓ Constipation
- √ Vaginal bleeding/discharge
- ✓ Pregnancy

#### ASSOCIATED SYMPTOMS

 ✓ Fever, headache, weakness, malaise, myalgias, mental status changes, rash

#### DIFFERENTIAL

- ✓ Liver (hepatitis, hemorrhage)
- ✓ Peptic ulcer disease/Gastritis
- ✓ Myocardial Infarction
- ✓ Pancreatitis
- / Kidney Stones
- Abdominal Aneurysm
- ✓ Appendicitis
- ✓ Bladder/Prostate disorder
- Pelvic (PID, Ectopic pregnancy, ovarian cvst)
- Diverticulitis
- / Bowel Obstruction
  - Gastroenteritis (infectious)



- ✓ Document the mental status and vital signs prior to administration of anti-emetic
- Abdominal pain in women of child-bearing age should be treated as ectopic pregnancy until proven otherwise
- ✓ Abdominal aneurysm should be suspected in patients over the age of 50.
- ✓ Repeat vital signs after any fluid bolus
- ✓ Appendicitis may present with vague, peri-umbilical pain which migrates to the RLQ over time



**MEDICAL PROTOCOL #2-02** 

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# ALLERGIC REACTION MEDICAL PROTOCOL # 2 - 02

#### HISTORY

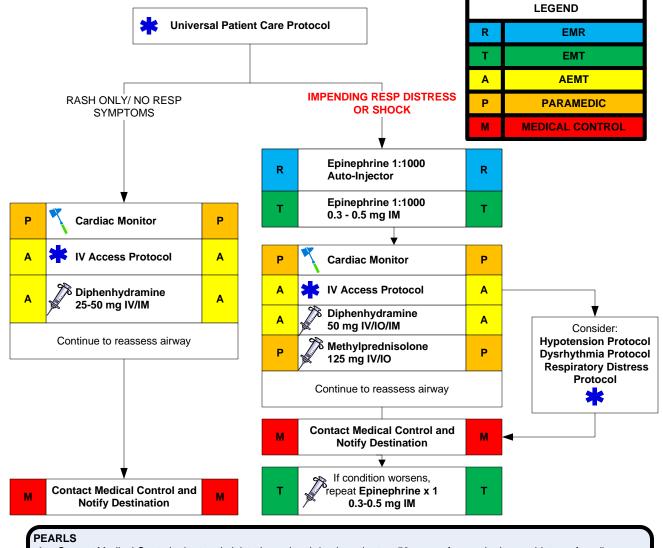
- Onset and location
- ✓ Insect sting or bite
- √ Food allergy/exposure
- ✓ Medication allergy/exposure
- √ New clothing, soap, detergent
- ✓ Past history of reactions
- ✓ Past medical history
- Medication history

#### SIGNS AND SYMPTOMS

- ✓ Itching or hives
- ✓ 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



- Contact Medical Control prior to administering epinephrine in patients > 50 years of age, who have a history of cardiac disease, or if the patient's heart rate is >150. Epinephrine may precipitate cardiac ischemia. These patients should receive a 12 lead EKG
- ✓ Any patient with respiratory symptoms or extensive reaction should receive IV/IO/IM diphenhydramine
- ✓ The shorter the onset of symptoms from contact, the more severe the reaction

#### TRINITY EMS SYSTEM PREHOSPITAL GUIDELINES 2021



**MEDICAL PROTOCOL #2-03** 

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# ALTERED MENTAL STATUS MEDICAL PROTOCOL # 2 - 03

#### HISTORY

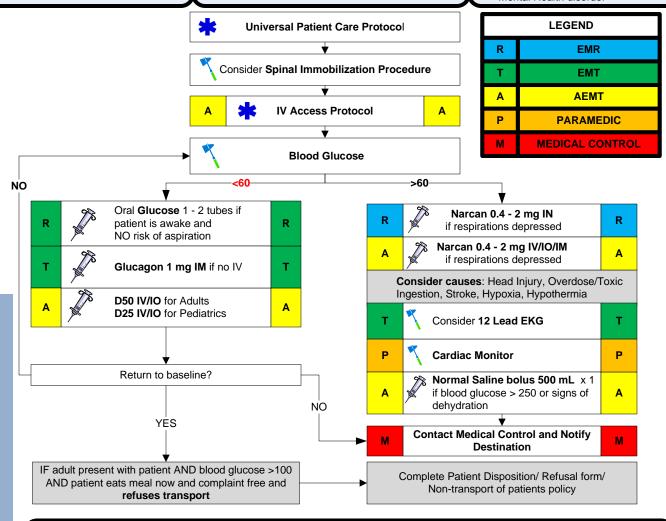
- Known diabetic, medic alert tag
- ✓ Drugs, drug paraphernalia
- ✓ Report of illicit drug use or toxic ingestion
- ✓ Past medical history
- ✓ Medications
- ✓ History of trauma
- ✓ Change in condition
- Changes in feeding or sleeping habits

#### SIGNS AND 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)
- ✓ Cardiac (MI, CHF)
- ✓ Hypothermia
- ✓ Infection (CNS and other)
- Shock (septic, metabolic, traumatic)
- ✓ Diabetes (hypo/hyperglycemia)
- ✓ Toxicologic or Ingestion
- ✓ Acidosis/Alkalosis/Hypoxia
- ✓ Electrolyte Abnormality
  - Mental Health disorder



- ✓ Be aware of Altered Mental Status as presenting sign of environmental toxin or Haz-Mat exposure and protect personal safety
- ✓ It is safer to assume hypoglycemia than hyperglycemia if doubt exists. Recheck blood glucose after Dextrose or Glucagon
- ✓ 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 (>250)
- ✓ Consider restraints if necessary for patient's and/or personnel's protection per the restraint procedure



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# DECEASED PERSON MEDICAL PROTOCOL # 2 - 04

#### HISTORY

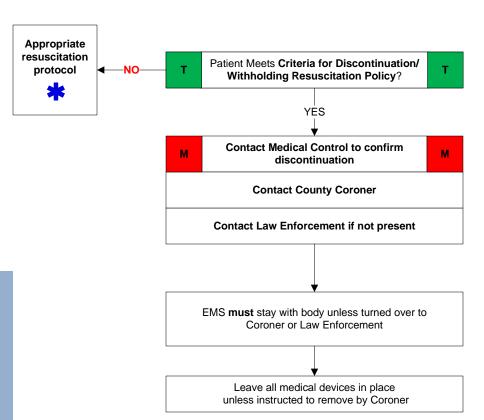
- Person encountered by EMS who meets criteria for obvious death
- ✓ Patient with DNR in place who is pulseless and apneic
- Patient for whom resuscitative efforts are ceased on scene

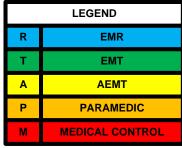
#### KEY INFORMATION:

- √ Name of primary care physician
- Known medical conditions
- ✓ Last time known to be alive

#### DIFFERENTIAL

 All deaths must be referred to law enforcement and/or coroner





#### Criteria for Discontinuation/ Withholding Resuscitation:

- ✓ Valid DNR order
- ✓ Rigor Mortis and/or Dependent Lividity
- ✓ Decapitation
- ✓ Incineration

- ✓ Contact of coroner is mandatory and must be done by either EMS or law enforcement
- ✓ Body may be released to Deputy Coroner
- ✓ All pre-hospital deaths **must** be reported to Coroner

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## **DENTAL PROBLEMS MEDICAL PROTOCOL #2-05**

#### HISTORY

- Age
- Past medical history
- Medications
- Onset of pain/injury
- Trauma with "knocked out" tooth
- Location of tooth
- Whole vs. partial tooth injury

#### SIGNS AND SYMPTOMS

- Bleeding
- Pain
- Fever
- Swelling
- Tooth missing or fractured

#### DIFFERENTIAL

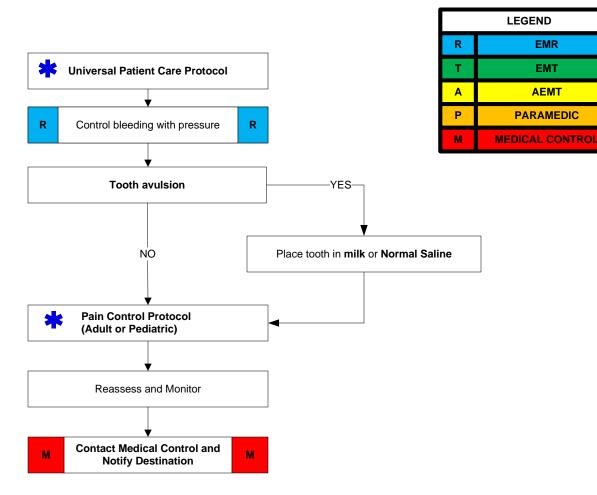
- Decay
- Infection
- Fracture
- Avulsion Abscess
- Facial cellulitis
- Impacted tooth (wisdom)

**EMR** 

**EMT** 

**AEMT** 

- TMJ syndrome
- Myocardial infarction



#### PEARLS

- Significant soft tissue swelling to the face or oral cavity can represent a cellulitis or abscess
- Scene and transport times should be minimized in complete tooth avulsions. Reimplantation is possible within 4 hours if the tooth is properly cared for
- All tooth disorders typically need antibiotic coverage in addition to pain control
- Occasionally cardiac chest pain can radiate to the jaw
- All pain associated with teeth should be associated with a tooth which is tender to tapping or touch (or sensitivity to cold or hot)

**MEDICAL PROTOCOL #2-05** 



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# EPISTAXIS MEDICAL PROTOCOL # 2 - 06

#### HISTORY

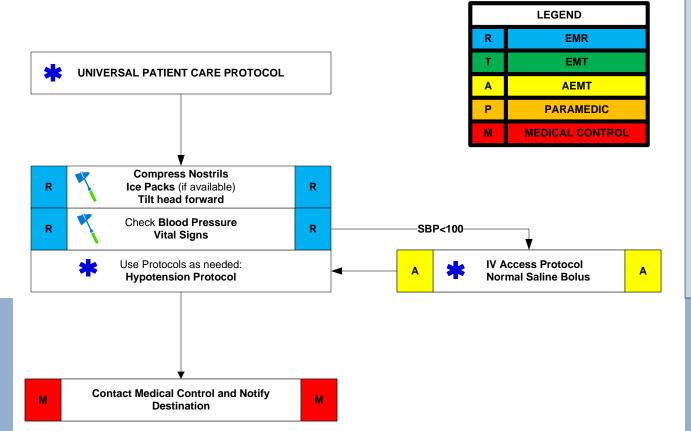
- ✓ Age
- ✓ Past medical history
- ✓ Medications (HTN, anticoagulants, aspirin, NSAIDS)
- ✓ Previous episodes of epistaxis
- ✓ Trauma
- ✓ Duration of bleeding
- Quantity of bleeding

#### SIGNS AND SYMPTOMS

- ✓ Bleeding from nasal passage
- ✓ Pain
- ✓ Nausea
- Vomiting

#### DIFFERENTIAL

- ✓ Trauma
- ✓ Infection (viral URI or sinusitis)
- ✓ Allergic rhinitis
- ✓ Lesion (polyps, ulcers)
- ✓ Hypertension



- ✓ It is very difficult to quantify the amount of blood loss with epistaxis
- ✓ Bleeding may also be occurring posteriorly. Evaluate the posterior blood loss by examining the posterior pharynx
- ✓ Anticoagulants include aspirin, Coumadin, NOAC's, non-steroidal inflammatory medications (NSAIDS) (ibuprofen), and many over the counter headache relief powders



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### OVERDOSE/TOXICITY **MEDICAL PROTOCOL #2-07**

#### HISTORY

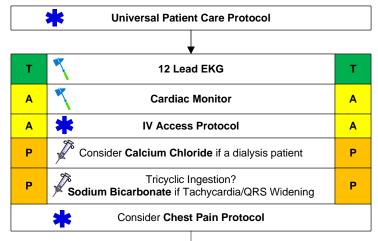
- Ingestion or suspected ingestion of a potentially toxic substance
- Substance ingested, route, quantity
- Time of ingestion
- Reason (suicidal, accidental, criminal)
- Available medications in home
- Past medical history, medications

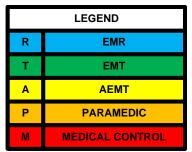
#### SIGNS AND SYMPTIONS

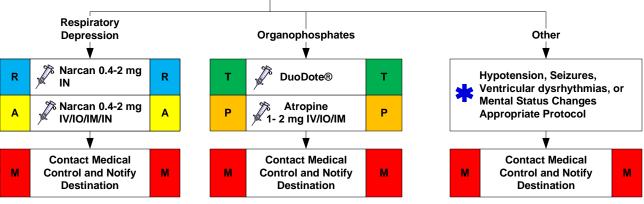
- Mental Status Changes
- Hypotension/ Hypertension
- **Decreased Respiratory Rate**
- Tachycardia, Dysrhythmia
- Seizures

#### DIFFERENTIAL

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







- 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,
- Tricyclic: 4 major areas of toxicity: seizures, dysrhythmia, 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: Dysrhythmia and mental status changes
- Solvents: nausea, coughing, vomiting, and mental status changes Insecticides: increased or decreased HR, increased secretions nausea, vomiting, diarrhea, pinpoint pupils
- Consider restraints if necessary for patient's and/or personnel's protection per the Restraint Procedure



## **PULMONARY EDEMA MEDICAL PROTOCOL #2-08**

#### HISTORY

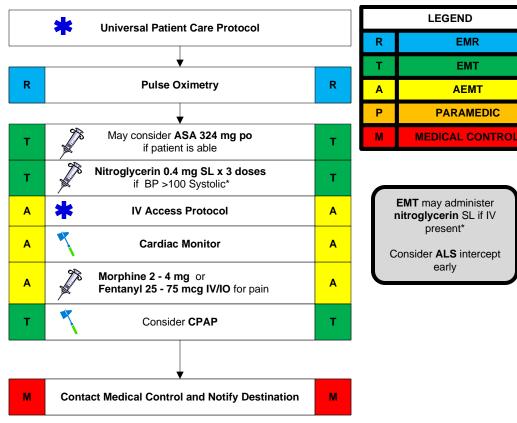
- Congestive Heart Failure
- Past medical history
- Medications (digoxin, Lasix)
- Viagra, Levitra, Cialis
- Cardiac history-past myocardial infarction

#### SIGNS/SYMPTOMS

- Respiratory distress, bilateral rales
- Apprehension, orthopnea
- Jugular vein distension
- Pink, frothy sputum
- Peripheral edema, diaphoresis
- Hypotension, shock
- Chest pain

#### Differential

- Mvocardial infarction
- Congestive Heart Failure
- Asthma
- Anaphylaxis
- Aspiration
- COPD
- Pleural effusion
- Pulmonary embolus
- Pericardial tamponade
  - Toxic exposure



#### PEARLS

- 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 FOR SEVERE HYPOTENSION
- Furosemide and narcotics have not been shown to improve the outcomes of EMS patients with pulmonary edema. Even though this traditionally been a mainstay of EMS treatment, it is no longer recommended
- If the patient has taken nitroglycerin without relief, consider the potency of the medication
- Contraindications to narcotics include severe COPD and respiratory distress. Monitor the patient closely
- 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
- Allow the patient to be in their position of comfort to maximize their breathing effort
  - Document CPAP application. Document 12 lead EKG

**MEDICAL PROTOCOL #2-**

**EMT** may administer nitroglycerin SL if IV

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# RESPIRATORY DISTRESS MEDICAL PROTOCOL # 2 - 09

#### HISTORY

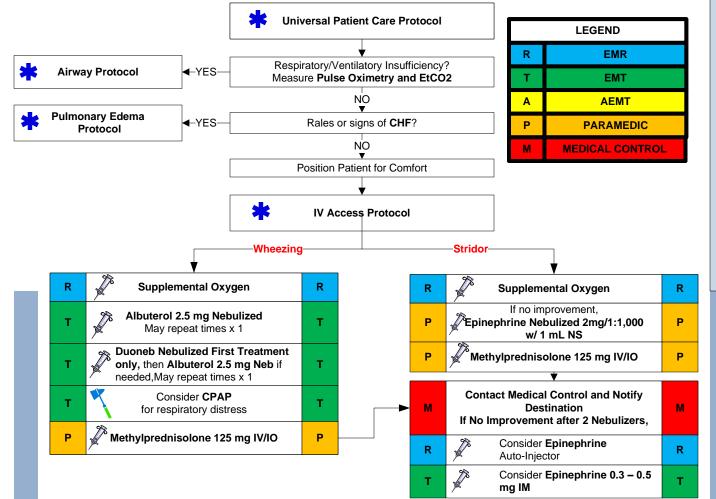
- Asthma/COPD chronic bronchitis, emphysema, congestive heart failure
- ✓ Home treatment (oxygen, nebulizer)
- ✓ Medications (theophylline, steroids, inhalers)
- Toxic exposure, smoke inhalation

#### SIGNS AND 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

- ✓ Anaphylaxis
- ✓ Aspiration
- ✓ COPD (Asthma, Emphysema, Bronchitis)
- ✓ Pneumonia
- ✓ Pulmonary embolus
- ✓ Pneumothorax
- ✓ Cardiac (MI or CHF)
- ✓ Hyperventilation
  - Inhaled toxin (carbon monoxide, etc.)



- ✓ Pulse oximetry must be monitored closely if initial saturation is ≤ 90%, or there is a decline in patient status despite normal pulse oximetry reading
- ✓ Contact Medical Control prior to administering epinephrine in patients over 50 years of age, have a history of cardiac disease, or if
  the patient's heat rate is >150. Epinephrine may precipitate cardiac ischemia. These patients must be on a cardiac monitor. A 12lead EKG is strongly recommended in these patients
- A silent chest in respiratory distress is a pre-respiratory arrest sign
  - ETCO2 should be used when Respiratory Distress is significant and does not respond to initial Albuterol dose



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# SEIZURE MEDICAL PROTOCOL # 2 - 10

#### HISTORY

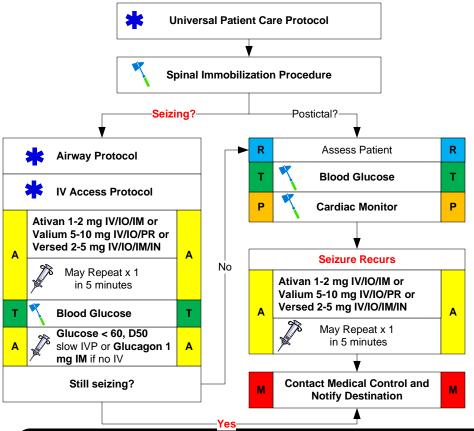
- Reported/witnessed seizure activity
- ✓ Previous seizure activity
- ✓ Medical alert tag information
- ✓ Seizure medications
- ✓ History of trauma
- ✓ History of diabetes
- ✓ History of pregnancy

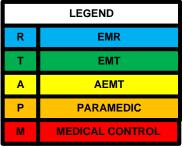
#### SIGNS AND SYMPTOMS

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

#### DIFFERENTIAL

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





MEDICAL PROTOCOL # 2 - 10

- ✓ Status epilepticus is defined as two or more successive seizures without a period of consciousness or recovery.
- ✓ Grand mal seizures (generalized) are associated with loss of consciousness, incontinence, and tongue trauma
- ✓ Focal seizures (petit mal) affect only a part of the body and are not usually associated with a loss of consciousness
- ✓ Jacksonian seizures are seizures which start as focal seizures and become generalized
- ✓ Be prepared for airway problems with continued seizures ALS intercept is necessary
- ✓ Assess occult trauma and substance abuse
- ✓ Be prepared to assist with ventilations, especially if diazepam or midazolam is used
- ✓ For any seizure in a pregnant patient, follow OB emergencies protocol
- ✓ Diazepam (valium) is not effective when administered IM. It should only be given IV/IO or rectally. Midazolam is well absorbed when administered IM and nasal
- ✓ Rectal Valium: Draw dose up in 3 ml syringe. Remove needle from syringe and attached syringe to an IV extension tube. Cut the distal end of the extension tube leaving about 3 or 4 inches of length, Insert tube in rectum and inject drug. Flush extension tube with 3 ml of air and remove



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# **VOMITING AND DIARRHEA MEDICAL PROTOCOL # 2 - 11**

#### HISTORY

- ✓ Age
- ✓ Time of last meal
- ✓ Last bowel movement/emesis
- Improvement or worsening with food or activity
- ✓ Duration of problem
- ✓ Other sick contacts
- ✓ Past medical history
- ✓ Past surgical history
- ✓ Medications
- ✓ Menstrual history
- ✓ Pregnancy
- ✓ Travel history
- ✓ Bloody emesis/diarrhea

#### SIGNS AND SYMPTOMS

- ✓ Pain
- Character of pain (constant, intermittent, dull, sharp, etc.)
- ✓ Distention
- ✓ Constipation
- ✓ Diarrhea
- ✓ Anorexia
- ✓ Radiation

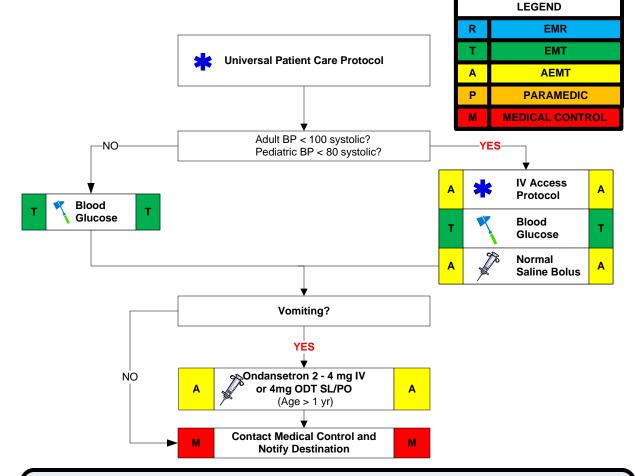
#### **ASSOCIATED SYMPTOMS**

(Helpful to localize source)

✓ Fever, headache, blurred vision, weakness, malaise, myalgias, cough, dysuria, mental status changes, rash

#### DIFFERENTIAL

- CNS (increased pressure, headache, stroke, CNS lesions, trauma or hemorrhage, vestibular)
- ✓ Myocardial infarction
- ✓ Drugs (NSAIDs, antibiotics, narcotics, chemotherapy)
- ✓ GI or Renal disorders
- ✓ Diabetic ketoacidosis
- Gynecologic disease (ovarian cyst, PID)
- / Infections (pneumonia, influenza)
- ✓ Electrolyte abnormalities
- √ Food or toxin induced
- ✓ Medication or substance abuse
- Pregnancy
- ✓ Psychological



- ✓ Beware of the children who are only vomiting. Pyloric stenosis, bowel obstruction, and CNS processes (bleeding, tumors, or increased CSF pressures) all may present with vomiting
- ✓ IV start is strongly recommended pre-hospital



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# SUSPECTED SEPSIS/SEPSIS ALERT MEDICAL PROTOCOL # 2 - 12

#### HISTORY

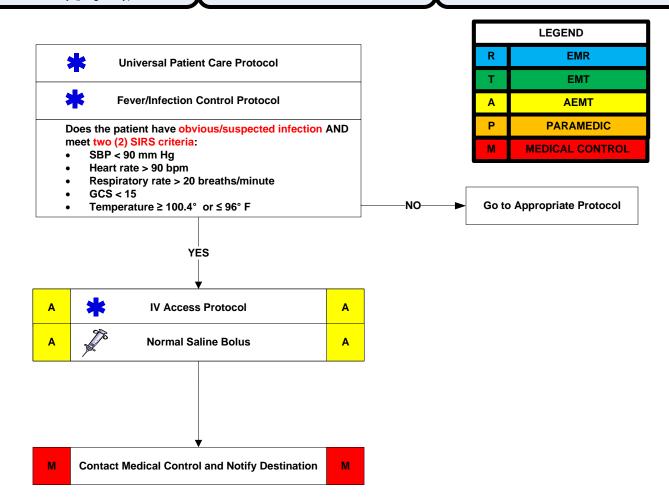
- ✓ Age(common in elderly)
- ✓ Past medical /surgical history
- ✓ Fever(onset, duration, elevation)
- ✓ Prior infections(UTI, pneumonia)
- ✓ Recent surgeries/procedures
- ✓ Immune status
- ✓ Implanted devices/prosthetics
- ✓ Immunizations
- ✓ Travel history
- Menstrual history (pregnancy)

#### SIGNS AND SYMPTOMS

- / Hypo/Hyperthermia
- √ Rash/bruising/bleeding
- ✓ Rigors/chills
- ✓ Altered Mental Status
- ✓ Delayed capillary refill
- ✓ Cyanosis
- ✓ Tachypnea
- ✓ Tachycardia
- ✓ Decreased urine output

#### DIFFERENTIAL

- ✓ Cardiogenic shock
- ✓ Hypovolemic shock
- ✓ Dehydration
- ✓ Neuroleptic malignant syndrome
- √ Toxicological emergency
- ✓ Stroke
- Hyperthyroidism



- ✓ Applies to all patients 18 years and older, with a suspected/known infection who meet SIRS criteria
- ✓ Aggressive fluid resuscitation is the most important prehospital treatment for septic patients
- Boluses should be given in 500 mL increments
- ✓ Repeated boluses of Normal Saline should be repeated up to a maximum of 3 liters or 30 mL/kg.
- If patient has a history of CHF or ESRD on dialysis, monitor for pulmonary edema or fluid overload
- If needed, supply supplemental oxygen or CPAP for oxygen saturations less than < 92%
  - Repeat vital signs after any fluid bolus