General Medical Care

FIELD TREATMENT GUIDELINE M-01

INDICATION	• Treatment of adult patients presenting with a medically related chief complaint.

BLS	• Ensure scene safety for crews and bystanders.
	• Exercise body substance isolation measures and use appropriate personal protective equipment (PPE).
	• Determine number of patients.
	• Determine need for additional resources.
	• Determine nature of illness.
	• Determine patient's level of consciousness, ABCs/(CAB in cardiac arrest), vital signs, and chief complaint/symptoms.
	*****If patient is in cardiac arrest, begin CPR and refer to Cardiac Arrest Management C-01*****
	• If indicated, determine if a valid POLST order or DNR verification form is in place, and act accordingly.
	• Maintain an open airway with **Airway/Respiratory Management BP-01.**
	  • If indicated, administer supplemental oxygen using the appropriate delivery device.
	  ▪ Oxygen should be administered in the presence of hypoxemia, dyspnea, shock, or SpO_2 <94%.
	  ▪ Avoid hyperoxygenation, especially in the presence of a suspected CVA/TIA or ACS.
	• At a minimum, monitor and document vital signs every 15 minutes on stable patients and every 5 minutes for patients with critical conditions.
	• Obtain:
	  • History and Physical Exam of current event.
	  • Past medical history.
	  • Medications.
	  • Allergies.
	  • Perform full secondary assessment.
	  • Blood Glucose (If indicated).
	  • Temperature (If indicated).
	• Perform necessary BLS interventions, e.g., ventilation, bleeding control, etc.
	• Ensure ALS response as appropriate.

ALS	If indicated:-
	• Perform ALS Interventions:
	  • **Endotracheal Intubation AP-01**.
	  • Intravenous therapy and/or **Intraosseous Infusion AP-08** and **Fluid Challenge AP-09**.
	  • **Pain Management AP-13**.
	  • **Sedation AP-14**.
	  • Administer medications in accordance with the specified Field Treatment Guideline.
	• Obtain additional field diagnostic testing:
	  • Carbon monoxide level and stroke scale.
	  • Apply the cardiac monitor **12-Lead ECG BP-03**.
	  • Perform **Waveform Capnography AP-12**.
	• Transport to the nearest appropriate treatment facility as defined in Napa County EMS Agency **Administrative Policy 501, Patient Destination**.
	  • Decisions to use lights and sirens should be based on the immediate clinical needs of the patient.
	  • Notification to the receiving facility should occur as early as possible.

KEY CONCEPTS	• If EMS aircraft is indicated, activate early. • Contact the base hospital for on-line medical control for all treatment outside of standing orders. • EMS crews should not administer interventions that require on-going medical assessment if a patient is not being transported to a receiving facility. For example, giving IV narcotics to a patient who intends to refuse transport. • The medication reference list includes all those medications that are utilized in the Napa County Field Treatment Guidelines; follow the guidance provided.

Foreign Body Airway Obstruction

FIELD TREATMENT GUIDELINE M-02

INDICATION	• Sudden onset of respiratory distress often associated with coughing, wheezing, gagging, or stridor due to a foreign-body obstruction of the upper airway.

BLS	• Follow **General Medical Care M-01**.
	• For pediatric patients, follow **General Pediatric Care P-01**.
	• Assess the degree of foreign body obstruction.
	  • Do not interfere with a mild obstruction; allow the patient to clear their airway by coughing.
	  • Administer oxygen.
	  • In severe foreign-body obstructions, the patient may not be able to make a sound. The patient may clutch his/her neck demonstrating the universal choking sign.
	• For an infant, deliver 5 back blows, followed by 5 chest compressions. This should be repeated until the object is expelled or the patient becomes unresponsive.
	• For a child or adult, perform subdiaphragmatic abdominal thrusts (Heimlich Maneuver) until the object is expelled or the patient becomes unresponsive.
	• If the patient becomes unresponsive, begin CPR immediately but look in the mouth before administering any ventilation. If a foreign-body is visible, remove it.
	*****Do not perform blind finger sweeps in the mouth or posterior pharynx*****

ALS	• If BLS measures are unsuccessful, perform hyperangulated video laryngoscopy or direct laryngoscopy. If foreign body is visible and easily accessible, attempt removal with Magill forceps. • If indicated, perform **Needle Cricothyrotomy AP-03.**
KEY CONCEPTS	• No additional considerations.

Respiratory Distress - Bronchospasm

FIELD TREATMENT GUIDELINE M-03

INDICATION

- Acute onset of respiratory difficulty, including asthma, COPD, toxic inhalation, and other etiologies that may induce bronchospasm.

BLS

- Follow **General Medical Care M-01**.
- For pediatric patients, follow **General Pediatric Care P-01**.

ALS

MILD TO MODERATE RESPIRATORY DISTRESS: mild wheezing/mild SOB/cough

- **Albuterol**:
  - *Adult*: 5 mg in 6 mL NS nebulizer. Repeat as clinically indicated.
  - *Pediatric*: Nebulized; repeat as clinically indicated. Administer according to PediaTape weight calculation and **Pediatric Medication Reference Cards**.
- **Ipratropium**:
  - *Adult*: 0.5 mg in 3 mL NS via handheld nebulizer. May be combined with albuterol for a one-time dose.
  - *Pediatric*: Nebulized; combined with albuterol for a one-time dose. Administer according to PediaTape weight calculation and **Pediatric Medication Reference Cards.**

SEVERE RESPIRATORY DISTRESS: cyanosis, accessory muscle use, speaking 1-2 word sentences, moderate to severe wheezing, and/or absent breath sounds.

- **Epinephrine (1:1,000)**:
  - *Adult*: 0.3 mg IM, may repeat x 2 at 10 minutes intervals as clinically indicated.
  - *Pediatric*: IM; may repeat once in 10 minutes. Administer according to PediaTape weight calculation and **Pediatric Medication Reference Cards.**
- **Albuterol**:
  - *Adult*: 5 mg in 6 mL NS nebulizer. Repeat as clinically indicated.
  - *Pediatric*: Nebulized; repeat as clinically indicated. Administer according to PediaTape weight calculation and **Pediatric Medication Reference Cards**.
- **Ipratropium**:
  - *Adult*: 0.5 mg in 3 mL NS via handheld nebulizer. May be combined with albuterol for a one-time dose.
  - *Pediatric*: Nebulized; combined with albuterol for a one-time dose. Administer according to PediaTape weight calculation and **Pediatric Medication Reference Cards.**

KEY CONCEPTS

- Nebulized medications can be administered via handheld nebulizer, mask, or in-line with BVM or via **CPAP AP-04**.
- Use caution when administering epinephrine to patients over 65 years of age, or patients with history of cardiovascular disease.
- Multiple doses of albuterol may cause anxiety, tachycardia, tremors, and hypertension.
- With severe asthma, all other measures should be exhausted before attempting endotracheal intubation.

Respiratory Distress - Acute Pulmonary Edema

FIELD TREATMENT GUIDELINE M-04

INDICATION

- Respiratory distress associated with history of pulmonary edema or congestive heart failure.
  - Patients may have rales or occasional wheezes.
  - Patients without history will typically present with elevated blood pressure in addition to abnormal lung sounds.

BLS

- Follow **General Medical Care M-01**.
- For pediatric patients, follow **General Pediatric Care P-01**.

ALS

- **12-Lead ECG BP-03**.
- **CPAP AP-04**.
- **Nitroglycerine**: Sublingual

  Adult:
  - With a blood pressure ≥ 100 mmHg, administer 0.4 mg SL.
  - With a blood pressure ≥ 150 mmHg, administer 0.8 mg SL.
  - Repeat every 3-5 minutes. MAX total dose of 8.0 mg.

  Pediatric: **Not locally indicated.**
- **Nitroglycerine**: 2% Paste

  Adult: If transport time is > 1 hour, administer ½ inch, applied to patient's chest. If blood pressure drops below 100 mmHg, remove.

  Pediatric: **Not locally indicated.**
- **Albuterol:**

  Adult: 5 mg in 6 mL NS nebulizer. Repeat as clinically indicated.

  Pediatric: Nebulized; repeat as clinically indicated.
  Administer according to PediaTape weight calculation and **Pediatric Medication Reference Cards**.

  Can be administered via handheld nebulizer, mask, or in-line with BVM or via **CPAP AP-04**.
- **Aspirin**:

  Adult: If Acute Coronary Syndrome is suspected in the presence of chest pain, administer 162 mg PO as one time dose. Have patient chew if possible. Do not use enteric coated tablets.

  Pediatric: **Not locally indicated.**

KEY CONCEPTS

- Begin immediate transport if patient presents as unlikely to improve on scene.
- Consider **Cardiogenic Shock C-08** if patient presents with pulmonary edema and hypotension.
- CPAP is not a ventilation device. Patients with inadequate respiratory rates or depth of respiration will need assistance with a BVM.

Altered Mental Status

FIELD TREATMENT GUIDELINE M-05

INDICATION

- Patients presenting with an acutely altered mental status.

BLS

- Follow **General Medical Care M-01**.
- For pediatric patients, follow **General Pediatric Care P-01**.
- Assess patient's Glasgow Coma Scale.
- Evaluate possible causes of change in mental status using AEIOU TIPS.

SUSPECTED POISONING/OVERDOSE

- Refer to **Poisoning/Overdose M-09**.

SUSPECTED HYPOGLYCEMIA

- If awake, able to hold head upright, and gag reflex is present, assist the patient to self-administer Oral Glucose. Patient MUST be able to swallow without difficulty.
- If not awake, not able to swallow, unable to hold head upright, or there is no gag reflex, maintain airway and left lateral position.

SYNCOPE

- Assess for underlying causes, e.g., stroke, cardiac, hypoglycemia, trauma, sepsis, shock.

SEIZURES

- If suspected seizure activity, refer to **Seizures M-06**.

STROKE/CVA/TIA

- If suspected stroke/CVA/TIA, refer to **Stroke/CVA/TIA M-19**.

ALS

HYPOGLYCEMIA

- **Dextrose 10%**: If blood glucose is < 60 mg/dL

  Adult: 25 g IV/IO. If altered mental status is not resolved and blood glucose remains < 60 mg/dL, may repeat in 5 gram increments every 5 minutes.

  Pediatric: IV/IO; If altered mental status is not resolved and blood glucose remains < 60 mg/dL, may repeat once in 5 minutes. Administer according to PediaTape weight calculation and **Pediatric Medication Reference Cards**.

KEY CONCEPTS

- Potential causes of altered mental status: AEIOU TIPS

A – Alcohol/Acidosis	T – Trauma/Toxins
E – Epilepsy/Environment	I – Infection (sepsis)
I – Insulin (diabetes)	P – Psychogenic
O – Overdose/Oxygen	S – Stroke/Shock
U – Uremia	

Seizures

FIELD TREATMENT GUIDELINE M-06

INDICATION	• A sudden episode of transient neurologic symptoms such as involuntary muscle movements, sensory disturbances and altered consciousness.
BLS	• Follow **General Medical Care M-01**. • For pediatric patients, follow **General Pediatric Care P-01**. • Protect from injury, cooling measures if febrile. • If blood glucose < 60 mg/dL, refer to **Altered Mental Status M-05**.

ALS	**ACTIVE SEIZURES**: Three (3) or more seizures in < 5 minutes, two (2) or more sequential seizures without full recovery of consciousness between seizures or any one (1) seizure lasting > 5 minutes
	• **Midazolam**: *Adult*:
	  • 5 mg IV/IO, may repeat once in 5 minutes, or;
	  • 5 mg IN/IM, may repeat once in 15 minutes.
	Pediatric: IV/IO, may repeat once in 5 minutes, or; IN/IM, may repeat once in 15 minutes. Administer according to PediaTape weight calculation and **Pediatric Medication Reference Cards**.
	• Continuous pulse oximetry is mandatory and must be documented every 5 minutes.

KEY CONCEPTS	• Patients without a history of epilepsy may be experiencing seizures as a byproduct of a separate underlying condition, e.g., thermoregulatory emergency, hypoglycemia, head injury, etc. Attempt to identify the underlying cause if/when time permits. • Be prepared to support respirations. • Airway management in the sedated patient does not necessarily mandate advance airway management; assess the patient's ability to protect his/her own airway. • Cooling measures for febrile patients should be limited to the removal or loosening of their clothing and blankets.

Allergic Reaction/Anaphylaxis

TREATMENT GUIDELINE M-07

INDICATION

- A result of sensitivities to substances called allergens that come into contact with the skin, nose, eyes, respiratory tract, and gastrointestinal tract.

BLS

- Follow **General Medical Care M-01**.
- For pediatric patients, follow **General Pediatric Care P-01**.
- If applicable, remove allergen
- For moderate to severe allergic reactions, BLS providers should utilize **Epinephrine Auto-Injector BP-06**.

ALS

MILD ALLERGIC REACTION: Urticaria:

- **Diphenhydramine**:
  Adult: 1 mg/kg IV/IO/IM, MAX single dose 50 mg.
  Pediatric: IV/IO/IM; base order required for repeat dosing. Administer according to PediaTape weight calculation and **Pediatric Medication Reference Cards**.

MODERATE ALLERGIC REACTION: Urticaria, swelling of the mucous membranes, profound dyspnea, wheezing, chest or throat tightness, abdominal cramps.

- **Epinephrine (1:1,000)**:
  Adult: 0.3 mg IM, may repeat x 2 at 10 minutes intervals as clinically indicated.
  Pediatric: IM; may repeat once in 10 minutes. Administer according to PediaTape weight calculation and **Pediatric Medication Reference Cards.**
- **Diphenhydramine**:
  Adult: 1 mg/kg IV/IO/IM, MAX single dose 50 mg.
  Pediatric: IV/IO/IM; base order required for repeat dosing. Administer according to PediaTape weight calculation and **Pediatric Medication Reference Cards**.
- **Albuterol**:
  Adult: 5 mg in 6 mL NS nebulizer. Repeat as clinically indicated.
  Pediatric: Nebulized; repeat as clinically indicated. Administer according to PediaTape weight calculation and **Pediatric Medication Reference Cards**.

ALS CONT.

SEVERE ALLERGIC REACTION/ANAPHYLAXIS: Urticaria, swelling of the mucous membranes, profound dyspnea, audible wheezing, chest or throat tightness, abdominal cramps and signs of shock, including: Poor skin signs, altered mental status, and hypotension.

- **Epinephrine (1:1,000)**:
  Adult: 0.3 mg IM, may repeat x 2 at 10 minutes intervals as clinically indicated.
  Pediatric: IM; may repeat once in 10 minutes. Administer according to PediaTape weight calculation and **Pediatric Medication Reference Cards.**
- **Diphenhydramine**:
  Adult: 1 mg/kg IV/IO/IM, MAX single dose 50 mg.
  Pediatric: IV/IO/IM; base order required for repeat dosing. Administer according to PediaTape weight calculation and **Pediatric Medication Reference Cards**.
- **Albuterol**:
  Adult: 5 mg in 6 mL NS nebulizer. Repeat as clinically indicated.
  Pediatric: Nebulized; repeat as clinically indicated. Administer according to PediaTape weight calculation and **Pediatric Medication Reference Cards**.
- **Fluid Challenge AP-09**.
- **BASE HOSPITAL ORDERS**
  - **Epinephrine (1:10,000)**:
    Adult: 0.1 mg IV/IO, may repeat once in 10 minutes if clinically indicated.
    Pediatric: **Not locally indicated.**

KEY CONCEPTS

- Treat as an allergic reaction only if history of exposure to allergen (such as bee sting) or other signs of acute allergy – such as hives, itching, erythema, edema, stridor, respiratory distress, wheezing, or hypotension.
- Be cautious in using Epinephrine in patients over 65 years of age, or patients with history of cardiovascular disease.
- Be cautious of Albuterol side effects with multiple doses (e.g., increase anxiety, tachycardia, tremulousness, and blood pressure).

Sepsis

FIELD TREATMENT GUIDELINE M-08

INDICATION	• Sepsis: A life threatening condition that typically progresses rapidly due to severe infection of multiple organ systems. Sepsis can lead to shock, organ failure and death if not promptly recognized and treated.
	• Patients should be considered septic and a Sepsis Alert initiated in the presence of these three (3) criteria:
	  • Confirmed or suspected presence of infection (i.e. urinary tract infection, respiratory infection, spreading skin infection, jaundice, recent lab values indicating an elevated white blood cell count, etc.)
	  • Adults: $ETCO_2$ < 25 mmHg and any 2 of the following markers:
	  • Temperature of > 38°C (100.4°F) or < 36°C (96.8°F).
	  • Respiratory rate > 20 breaths per minutes.
	  • Heart Rate > 90 bpm.
	  • Pediatrics: $ETCO_2$ < 32 mmHg and any 2 of the following markers:
	  • Temperature of > 38°C (100.4°F) or < 36°C (96.8°F).
	  • Tachypnea (reference **Normal Pediatric Vital Signs** chart).
	  • Tachycardia (reference **Normal Pediatric Vital Signs** chart).

BLS	• Follow **General Medical Care M-01**. • For pediatric patients, follow **General Pediatric Care P-01**. • Initiate a Sepsis Alert to the receiving facility as early as possible. • Administer 100% oxygen via NRB.
ALS	• Administer **Fluid Challenge AP-09**.
KEY CONCEPTS	• Continuous $ETCO_2$ monitoring should be used. • Early notification to the receiving facility allows for appropriate preparation to receive the patient.

Poisoning/Overdose

FIELD TREATMENT GUIDELINE M-09

INDICATION

- Poisoning: May be the result of exposure to toxic substances from ingestion, inhalation, injection or skin absorption.
- Overdose: Is the result of an individual's intentional / accidental exposure to an excessive or dangerous dose of a pharmacological substance(s).

BLS

- Follow **General Medical Care M-01**.
- For pediatric patients, follow **General Pediatric Care P-01**.
- Contact Poison Control Center (if necessary): 1-800-404-4646

SUSPECTED NARCOTIC OVERDOSE

- In the presence of altered mental status (GCS <15) and respiratory efforts are depressed (<8/min).
- **Naloxone:** *Adult/Pediatric*: 0.4 mg increments IN, divided evenly into each nare, titrated to reverse respiratory depression. Max total dose of 2 mg.

ALS

SUSPECTED OPIATE OVERDOSE:

- In the presence of altered mental status (GCS <15) and respiratory efforts are depressed (<8/min).
- **Naloxone:** *Adult*: 0.4 mg IV/IO/IN/IM. May repeat every 3-5 minutes, titrated to reverse respiratory depression. Max total dose of 2 mg.

  Pediatric: IV/IO/IN/IM; titrate to reverse respiratory depression. Administer according to PediaTape weight calculation and **Pediatric Medication Reference Cards**.

CAUSTIC SUBSTANCES (ACIDS/ALKALI):

- No specific ALS treatment is recommended.

HYDROCARBONS (KEROSENE, GASOLINE, LIGHTER FLUID, TURPENTINE, FURNITURE POLISH, ETC.):

- No specific ALS treatment is recommended.

INSECTICIDES (ORGANOPHOSPHATES, CARBONATES):

- Skin exposure: Decontaminate patient as soon as possible
- Evaluate for severe reaction using SLUDGEM (see below):
- **Atropine**: *Adult*: 2.0 mg slow IV/IO/IM. May repeat once in 5 minutes, MAX total dose of 4.0 mg. IM administration should only be considered if unable to establish IV/IO.

  Pediatric: IV/IO/IM; may repeat once in 5 minutes.

  Administer according to PediaTape weight calculation and **Pediatric Medication Reference Cards**.

ALS CONT.

CYCLIC ANTIDEPRESSANTS: (amitriptyline, nortriptyline, trazadone, etc.)

- Anticipate rapid deterioration of condition.
- In the presence of life-threatening dysrhythmias (hemodynamically significant supraventricular rhythms, ventricular dysrhythmias):
  - Hyperventilate if assisting ventilations or if intubated.
  - **Sodium Bicarbonate:** *Adult*: 1 mEq/kg IV/IO, may repeat once in 5 minutes

    Pediatric: IV/IO; base order required for repeat dosing. Administer according to PediaTape weight calculation and **Pediatric Medication Reference Cards**.

PHENOTHIAZINE/DYSTONIC REACTIONS: (haloperidol, chlorpromazine, prochlorperazine, etc.)

- **Diphenhydramine:** *Adult*: 1 mg/kg IV/IO/IM, MAX single dose of 50 mg.

  Pediatric: IV/IO/IM; base order required for repeat dosing. Administer according to PediaTape weight calculation and **Pediatric Medication Reference Cards**.

SUSPECTED SMOKE INHALATION/CARBON MONOXIDE/CYANIDE TOXICITY:

- Refer to **Smoke Inhalation/CO Monitoring & Cyanide Toxicity M-10**.

KEY CONCEPTS

- Consider rapid transport.
- Early notification to the receiving facility allows for appropriate preparation to receive the patient.
- Potential symptoms of organophosphate exposure: SLUDGEM:

  S – Salivation
  L – Lacrimation
  U – Urination
  D - Defecation
  G – Gastro-Intestinal Irritation
  E – Emesis
  M – Miosis
- Prehospital personnel should avoid contamination to poisons and wait for patients to be appropriately decontaminated prior to providing treatment.
- Patients presenting with related symptoms should be treated by appropriate treatment guidelines (shock, seizures, etc.).
- Naloxone should only be administered if both mental status and respiratory effort are depressed. Administration should always be titrated to ensure an adequate respiratory rate not to restore consciousness.
- Use caution when administering naloxone to narcotic-dependent patients as it may cause acute withdrawal. This includes administration to neonates of narcotic-addicted mothers.
- Naloxone is an antagonist only to opioid narcotics and is not effective with other medications.
- Continuous $ETCO_2$ monitoring should be used.

Smoke Inhalation / Carbon Monoxide Monitoring & Cyanide Toxicity

FIELD TREATMENT GUIDELINE M-10

INDICATION

- Carbon Monoxide Poisoning: Carbon monoxide is a colorless, odorless and tasteless poisonous gas that can be fatal when inhaled. Carbon Monoxide inhibits the blood's capacity to carry oxygen. Suspect CO in the presence of any fire.
  - Signs/Symptoms: Dizziness, severe headaches, nausea, sleepiness, fatigue/weakness and disorientation/confusion.
- Cyanide Toxicity: Cyanide exists as a gas and as a product of combustion, and it is also in liquid and powdered formulations in solvents, reagents and cleaning compounds.
  - Signs/Symptoms: Headache, dizziness, nausea, vomiting, confusion, syncope, ALOC, hypotension, dyspnea, seizures, dysrhythmias, loss of consciousness, cardiovascular collapse, coma and death.

BLS

- Follow **General Medical Care M-01**.
- For pediatric patients, follow **General Pediatric Care P-01**.
- Contact Poison Control Center (if necessary): 1-800-404-4646
- Administer 100% oxygen via NRB.

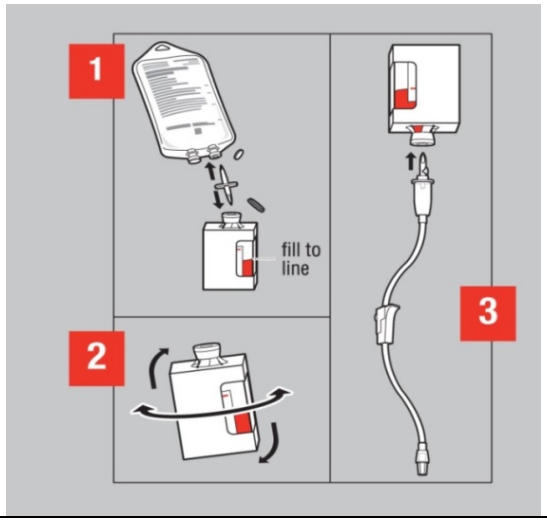
ALS

SUSPECTED CYANIDE TOXICITY:

- **Hydroxocobalamin:** *Adult*: 5 g IV/IO infusion over 15 minutes (5mL/min). May repeat once if severe signs of poisoning and lack of clinical response to first dose, MAX total dose of 10 g.

  Pediatric: **Not locally indicated.**

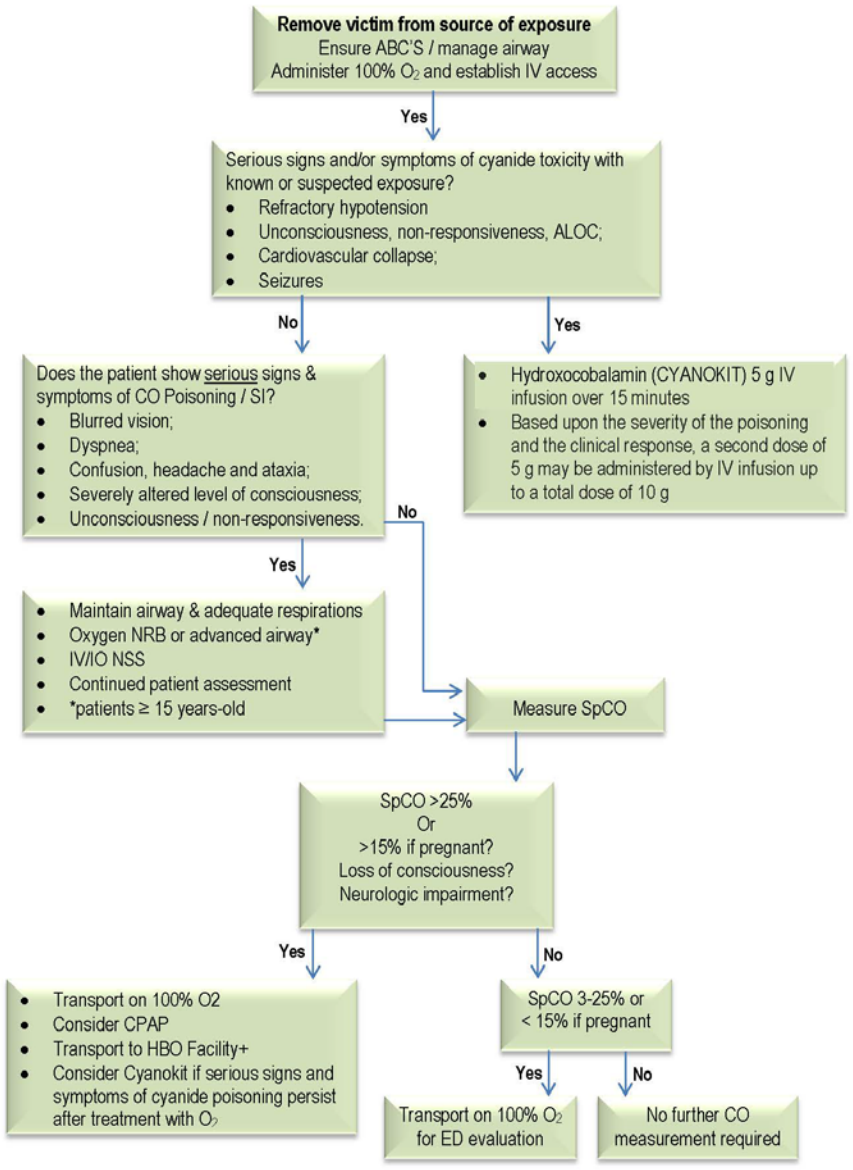
- Preparation and Administration:
  - Reconstitute: Place the vial in an upright position. Add 200 mL of 0.9% Sodium Chloride Injection to the vial using the transfer spike. Fill to the line.
  - Mix: The vial should be repeatedly inverted or rocked, not shaken, for at least 60 seconds prior to infusion.
  - Infuse Vial: Use vented intravenous tubing, hand and infuse over 15 minutes.
- Consider **Fluid Challenge AP-09**.



KEY CONCEPTS

- Prehospital personnel should avoid contamination to poisons and wait for patients to be appropriately decontaminated prior to providing treatment.
- Consider rapid transport.
- Pulse oximetry values may be unreliable in smoke inhalation patients.
- Smoke inhalation should be particularly suspected in patients rescued from close-space structure fires.
- Consider transport to an area hospital that has hyperbaric oxygen (HBO) chambers after consultation with Base Hospital.
- There are no rapid methods to detect cyanide. Providers may be capable of measuring hydrogen cyanide concentrations in the air. In patients (and providers) exposed to a fire, consider the possibility of carbon monoxide exposure in addition to cyanide toxicity.
- Patients presenting with related symptoms should be treated by appropriate treatment guidelines (shock, seizures, etc.).

SMOKE INHALATION/CARBON MONOXIDE MONITORING & CYANIDE TOXICITY ALGORITHM



+Area hospitals that have hyperbaric oxygen (HBO) chambers:

- **John Muir Medical Center**
  Walnut Creek (925)947-3212

Snakebite

FIELD TREATMENT GUIDELINE M-11

INDICATION	• When a person knows they have been bitten by a poisonous or unidentified snake or is bitten by an unknown source with physical evidence of rattlesnake bite (one or more puncture wound) and has symptoms of envenomation such as local pain, swelling or numbness.
BLS	• Follow **General Medical Care M-01**. • For pediatric patients, follow **General Pediatric Care P-01**. • Reassure patient and keep calm. • Immobilize extremity at or below heart level. Restrict patient's movement. • Remove jewelry, clothes, or constricting items. • Mark the affected area with pen and record time to measure rate of spread. • Expedite transport to most appropriate facility that stocks appropriate antivenin.
ALS	• All specific ALS treatment is identified in **General Medical Care M-01**.
KEY CONCEPTS	• Provide early notification to receiving facility. • Monitor extremity closely for signs of compartment syndrome. • Identify causative agent or attempt to provide description/type of snake. • If snake was an exotic pet or zoo animal (e.g., coral snake, cobra, krait, or Mojave rattlesnake), neurologic or respiratory depression may precede local reaction. Observe for mental status change, respiratory depression, convulsions, or paralysis. • Due to the nature of certain venom, monitor airway, breathing closely. Be prepared to support ventilations • Do not allow the application of ice or tourniquets. Do not allow incision of the wound.

Thermoregulatory Emergencies

FIELD TREATMENT GUIDELINE M-12

INDICATION

- An alteration in the temperature of the body which causes changes in bodily functions.

BLS

- Follow **General Medical Care M-01**.
- For pediatric patients, follow **General Pediatric Care P-01**.

HYPERTHERMIA

- Move to cool environment and begin active cooling measures.
  - Remove clothing and splash/sponge/mist with water.
  - Place cool packs on neck, axilla, and inguinal area.
  - Promote cooling by fanning.

HYPOTHERMIA

- Move to sheltered area minimizing physical exertion or movement, remove wet clothing and cover with warm, dry sheet or blankets.

ALS

HYPERTHERMIA (SEVERE)

- Consider **Fluid Challenge AP-09**.

HYPOTHERMIA (SEVERE)

- Closely monitor cardiac rhythm and move quickly but gently to warm environment (ambulance).

KEY CONCEPTS

- Cardiac dysrhythmias are often a byproduct of the thermoregulatory emergency. Use caution when administering cardiac medication.

Childbirth

FIELD TREATMENT GUIDELINE M-13

INDICATION

- Imminent birth without sufficient time to make it to a receiving facility for delivery.

BLS

- Follow **General Medical Care M-01** for both mother and child.
- If assessment reveals abnormal presentation, e.g., prolapsed cord or breech / limb presentation, refer to **Obstetric Emergencies M-14**. Relevant conditions include nuchal cord, prolapsed cord, breech presentation, limb presentation, vaginal hemorrhage, seizures.
- Control the descent of the fully crowned head with your hand cupped over the cranium.
- Support the head as it delivers,
- If the cord is around the neck, if possible gently slip it over the head or across the shoulder,.
    - If the cord is so tight that it can't be slipped over the head of the baby, clamp and cut between the clamps. This is only as a last resort once the cord is clamped, the baby is without an oxygen supply until it breathes on its own.
- When the head is delivered, it will rotate naturally to face laterally. Gently lower the head to deliver the anterior (upper) shoulder.
- When upper shoulder is delivered, gently raise the head to deliver the posterior (lower) shoulder. The body should then deliver smoothly.
- Dry, stimulate and wrap warmly. Prioritize warming measures to prevent neonatal hypothermia
- If infant does not cry vigorously or appears to be having difficulty clearing it's airway.
    - Suction ONLY if secretions including meconium, causes airway obstruction
    - If suctioning, always suction mouth first, then nares
- Clamp and cut the cord between the two clamps. Leave a minimum of 6 inches of cord from the umbilicus. There is no hurry to clamp the cord, but do not delay drying and wrapping baby. Document if the cord is cut by sterile or non-sterile equipment.
- Once baby is delivered and there are no signs of distress, refer to **Newborn Care P-05**. If there are signs of distress, refer to **Neonatal Resuscitation P-04**.

ALS

- All specific ALS treatment is identified in **General Medical Care M-01**.

KEY CONCEPTS

- If delivery will occur prior to arrival at the hospital, delay transport and assist delivery at the scene.
- The vast majority of deliveries are uncomplicated and require minimal assistance. The major life threats are of neonatal asphyxia and maternal hemorrhage.

Obstetric Emergencies

FIELD TREATMENT GUIDELINE M-14

INDICATION

- Life-threatening medical conditions that occur in pregnancy or during or after labor and delivery.

BLS

- Follow **General Medical Care M-01**.

Nuchal Cord

- Attempt to slip the cord over the baby's head.
- If unable, insert gloved finger between baby's neck and cord and rotate around neck in circular fashion in attempt to slide cord over the neck.
- As a last resort, consider double clamping the cord and cutting between clamps, expediting delivery ASAP.

Prolapsed Cord

- Place the mother in the knee-chest position (patient facing the gurney, chest level to bed, knees tucked under chest, pelvis and buttocks elevated).
- Insert a gloved hand into the vagina and gently push the presenting part (e.g. the neonate's head or shoulder off the cord. Do not pull on the cord.
- Advise mother not to push.

Breech Presentation

- Allow delivery to proceed passively until the baby's waist appears. Gently rotate the baby to a face down position and continue with the delivery.
- If head does not readily deliver, insert a gloved hand into the vagina to relieve pressure on the cord and create an air passage for the infant. Transport & monitor vital signs and infant condition frequently.

Limb Presentation

- Place the mother in the knee-chest position (patient facing the gurney, chest level to bed, knees tucked under chest, pelvis and buttocks elevated).

ALS

- If indicated, refer to **Vaginal Hemorrhage M-15**.
- If indicated, refer to **Seizures M-06**.

KEY CONCEPTS

- Severe abdominal pain may be an indication of uterine rupture, septic abortion, or ruptured ectopic.
- Rapid transport with early notification to receiving facility should be considered early in the management of obstetric emergencies.
- If inspection of perineum reveals abnormal presentation (i.e. foots, buttocks, hand or face), rapid transport is indicated.
- If there is any question on how to proceed, contact the base hospital for on-line medical control.

NAPA COUNTY EMS AGENCY

Vaginal Hemorrhage

FIELD TREATMENT GUIDELINE M-15

INDICATION	• Abnormal presentation of vaginal hemorrhage.

BLS	• Follow **General Medical Care M-01**.
	• For pediatric patients, follow **General Pediatric Care P-01**.
	• **Pregnant patients:**
	  ◦ Place in left lateral (recovery) position unless **Spinal Motion Restriction BP-05** is indicated.
	• **Post-Partum patients:**
	  ◦ If post-partum and placenta has delivered, fundal massage and put infant to breast if appropriate.

ALS	• All specific ALS treatment is identified in General Medical Care.
KEY CONCEPTS	• If appropriate, identify last menstrual period, length of gestation if pregnant, abdominal masses or tenderness, amount of bleeding, passage of tissue, trauma. • Rapid transport with early notification to receiving facility should be considered early in the management of an unstable vaginal hemorrhage. • If tissue has been passed, place in a plastic bag and bring to the emergency department.

Nausea/Vomiting

FIELD TREATMENT GUIDELINE M-16

INDICATION	• Patients experiencing nausea/vomiting.
BLS	• Follow **General Medical Care M-01**. • For pediatric patients, follow **General Pediatric Care P-01**.
ALS	• **Ondansetron**: *Adult*: 4 mg IV/IM/PO. May repeat every 10 minutes, MAX total dose of 12 mg. *Pediatric*: IV/IO/IM; may repeat every 10 minutes. Administer according to PediaTape weight calculation and **Pediatric Medication Reference Cards**. • For motion sickness only, consider giving in addition to ondansetron: • **Diphenhydramine**: *Adult*: 1 mg/kg IV/IO/IM, MAX single dose 50 mg. *Pediatric*: IV/IO/IM; base order required for repeat dosing. Administer according to PediaTape weight calculation and **Pediatric Medication Reference Cards**. • Consider **Fluid Challenge AP-09**, if patient has been experiencing significant vomiting.
KEY CONCEPTS	• Give ondansetron with caution if patient gives history of prolonged QT Syndrome. • Ondansetron may be prophylactically co-administered with fentanyl only if pain control is necessary and patient asks or has a history of nausea / vomiting with opiates. • Oral disintegrating tablets can be placed on tongue and do not need to be chewed. Medication will dissolve and be swallowed with saliva.

Drowning/Near-Drowning

FIELD TREATMENT GUIDELINE M-17

INDICATION	• Drowning: Loss of consciousness in water, in full cardiopulmonary arrest. • Near Drowning: Loss of consciousness in water, not in full cardiopulmonary arrest.
BLS	• Follow **General Medical Care M-01**. • If found in a setting of trauma, follow **General Trauma Care T-01**. • If in cardiac arrest, follow **Cardiac Arrest Management C-01**. • For pediatric patients, follow **General Pediatric Care P-01**.
ALS	• Consider the use of **CPAP AP-04**, if patient is conscious with spontaneous respirations. • Consider managing **Thermoregulatory Emergencies M-12** when treating near-drowning.
KEY CONCEPTS	• Base Hospital Contact should be made prior to discontinuing resuscitative efforts in hypothermic patients. • Remove wet clothing and cover with warm dry sheets or blanket; • Anticipate possible vomiting. Take precautions against aspiration and be prepared with suctioning.

Naloxone Administration by Law Enforcement (NALE)

FIELD TREATMENT GUIDELINE M-18

INDICATION

- Overdose: A patient as a result of an individual's intentional / accidental exposure to an excessive or dangerous dose of a pharmacological substance that is:
  - unconscious or has an acutely altered mental status patient; and
  - has depressed respiratory efforts (respiratory rate <8/min).

PSFA/BLS

- Ensure EMS has been activated using the 9-1-1 system.
- Maintain standard blood and body fluid precautions, use personal protective equipment.
- Check patient/victim for responsiveness.
- Open the airway using Basic Life Support techniques.
- Perform BVM or mouth to mask ventilations, if indicated.
- Perform CPR if pulseless.

SUSPECTED NARCOTIC OVERDOSE

- In the presence of an unconscious or an acutely altered mental status patient that also has depressed respiratory efforts (<8/min):

  Administer:

  - **Intranasal Naloxone:** *Adult/Pediatric*: 4 mg intranasally. May repeat once.
- Prepare for possible narcotic reversal behavior or withdrawal symptoms (vomiting and agitation) in response to naloxone with a patient that is narcotic dependent.
- Notify transporting EMS personnel of administration of naloxone.

KEY CONCEPTS

- Prehospital personnel should avoid contamination to poisons and wait for patients to be appropriately decontaminated prior to providing treatment.
- Naloxone should only be administered if both mental status and respiratory effort are depressed.
- Administration should always be titrated to ensure an adequate respiratory rate not to restore consciousness.
- Use caution when administering naloxone to narcotic-dependent patients as it may cause acute withdrawal. This includes administration to neonates of narcotic-addicted mothers.
- Naloxone is an antagonist only to opioid narcotics and is not effective with other medications.
- Participating Law Enforcement PSFA Agencies shall report all cases of naloxone administration to Napa County EMS using a **Napa County EMS Event Reporting Form**.

Stroke/CVA/TIA

FIELD TREATMENT GUIDELINE M-19

INDICATION

- Signs and symptoms consistent with a stroke.

BLS

- Follow **General Medical Care M-01**.
- If blood glucose < 60 mg/dL, refer to **Altered Mental Status M-05**.
- Perform Cincinnati Stroke Scale, visual field assessment and finger-to-nose test

CINCINNATI PREHOSPITAL STROKE SCALE	
Facial Droop	Ask patient to smile or grimace. Symmetrical smile or face is normal. Asymmetry is abnormal.
Arm Drift	Have the person close their eyes and hold their arms straight out in front for about 10 seconds. If both arms stay still or move equally, this is normal. If one arm does not move, or one arm drifts down more than the other, this is abnormal.
Speech Abnormalities	Have the person say, "You can't teach an old dog new tricks," or some other simple, familiar saying. If the person slurs the words, gets some words wrong, or is unable to speak, this is abnormal.

VISUAL FIELDS/CEREBRAL FUNCTION EVALUATION	
Visual Fields	• Face the patient • Ask the patient to look straight ahead or at your nose. • Move your fingers in each of four visual field quadrants (upper right, upper left, lower right, lower left) • Ask the patient to point to the side that they see the fingers moving. • If you are moving your fingers and they do not see one side (e.g., upper right), test again on the same side but opposite quadrant (e.g., lower right). • Note any field without vision
Finger-to-Nose test	• Patient holds arms at their shoulder to 90 degrees with elbows flexed to 90 degrees • Place your index finger at various locations in front of the patient at a distance that requires patient to extend their elbow to reach your finger • Ask patient to use their index finger on one hand to touch their index finger to your finger, then touch their index finger to their own nose, then to your finger • Repeat several times with the examiner moving their target finger each time • Patient repeats the process using the opposite hand's index finger

BLS

- If any one of these tests is abnormal and is a new finding, this may indicate an acute stroke and the following action should occur:
  - Identify and Document Time Last Known Well and Time of Symptom Discovery (Clock Time)
  - Last Known Well < 4 hours? – Yes
    - Declare “STROKE ALERT” to the receiving facility.
    - Document “STROKE ALERT” in the PCR.
    - If “STROKE ALERT” declared and time allows.
    - ID family/historian. Document contact information or encourage them to accompany patient.
- Document and report use of anticoagulants (e.g. Coumadin (warfarin), Pradaxa (dabigatran), Xarelto (rivaroxaban), Eliquis (apixaban), Lovenox (enoxaparin), Arixtra (fondaparinux).

ALS

- All specific ALS treatment is identified in **General Medical Care M-01**.

KEY CONCEPTS

- Signs and symptoms of stroke include:
  - Altered mental status
  - Weakness or paralysis
  - Visual disturbance
  - Sensory loss
  - Aphasia or dysarthia
  - Syncope
  - Dizziness/Vertigo
  - Nausea/Vomiting
  - Headache
  - Seizure
  - Respiratory pattern change
  - Hypertension/hypotension
- With suspected stroke, when possible, bring a family member or other on-scene historian to the receiving facility.
- If exact time of onset of symptoms is unclear, use last time patient known to be at baseline for time of onset.
- EMS personnel should initiate rapid transport if the interval from the onset of Stroke symptoms to arrival at receiving facility will be 4 hours or less.