

Abdominal Pain

Treatment

FR/EMT

Airway protocol

EMT I, P

Vascular Assess procedure

If shock syndrome follow shock protocol

Cardiac monitor

For nausea with vomiting Zofran (Ondansetron), 4 mg IV or IM slowly, *Peds* = 0.1 mg/kg IV or

IM (max 4 mg), children <12 OLMC is required

Pain management protocol

Airway Treatment

FR/EMT's

Administer oxygen if needed:

Nasal cannula 2 to 6 LPM

Non-rebreather mask (NRB) 12 to 15 LPM

For patients with decreased level of consciousness or unable to protect their airway

Place a nasopharyngeal airway (NPA) or

Oropharyngeal airway (OPA)

If patient has poor or no air exchange

Bag-Valve Mask (BVM) with O₂ if available (consider cricoid pressure if personnel available)

or

Ventilator

Carbon Dioxide Detection any patient with SOB, chest pain, numbness, tingling or unconscious

EMT

King Airway for respiratory distress/failure with no gag reflex or cardiac arrest: To help determine O₂ levels use pulse oximetry, remember patients with CO₂ poisoning need high-flow O₂ even with good pulse oximetry

EMT I, P

Cardiac monitor

EMT P

Simple intubations:

Suction, BVM/Ventilator, O₂, ETCO₂ monitor, Cardiac monitor, oximetry

Neuromuscular Blockade: as above and

Versed 5 mg IV/IM, repeat as needed to a maximum of 10 mg, **Peds** = 0.1 mg/kg IV, repeat as needed to a maximum of 5 mg, 0.2 mg/kg IM, repeat as needed to a maximum of 10 mg

Lidocaine Adult and **Peds** = 1.5 mg/kg for Inner Cranial Pressure

Atropine **Peds** = 0.02 mg/kg IV if pre-existing bradycardia or < 6 years old (0.1 mg minimum dose)

Succinylcholine 1.5 mg/kg IV, **Peds** = children <6 years old, 2mg/kg IV

Rocuronium Adult or **Peds** 0.2mg/kg IV/IO, Dose may be repeated once if needed

Cricothyrotomy: Adult or **Peds**

Allergic Reactions

Treatment

FR/EMT's

Airway protocol

If insect sting, gently remove injection mechanism by scraping – not pinching or twisting if still present

EMT's

Epinephrine: If symptomatic 0.3 mg (0.3 ml) 1:1,000 SQ/IM, if no improvement, repeat this epinephrine regimen every 5-10 minutes, **Peds** = 0.01 mg/kg SQ/IM – Max 0.3 mg

EMT I, P

Cardiac monitor

Vascular Access procedure

If blood pressure > 90mm, epinephrine 0.3 mg (0.3 – 0.5 ml) 1:1,000 SQ/IM, **Peds** = 0.01 mg/kg SQ – Max 0.3 mg

If blood pressure < 90mm, epinephrine 0.3 mg (3.0 – 5.0 ml) 1: 10,000 IV, **Peds** = 0.01 mg/kg IV – Max 0.3 mg

If shock syndrome is present consider shock protocol

Diphenhydramine (benadryl) 25-50 mg slow IV or IM, **Peds** = 1-2 mg/kg slow IV or IM (max 25 mg)

EMT P

Peds = Epinephrine 0.1 mg/kg 1:1,000 ET

Altered Mental Status/Coma

Treatment

FR and EMT's

Airway protocol

Hypoglycemia protocol if suspected hypoglycemia

EMT I, P

Cardiac monitor

Vascular Assess procedure

If in shock, consider shock protocol

Narcan 2 mg IV, IM, SQ every 5 min. up to 8.0 mg, *Peds* = 0.1 mg/kg up to 2.0 mg IV, IM, SQ every 5 min up to 0.4mg/kg

EMT P

Narcan 2 mg ET every 5 min up to 8.0 mg, *Peds* = 0.1 mg/kg up to 2.0 mg ET every 5 min up to 0.4mg/kg

Cerebrovascular Accident (Stroke)

Treatment

FR, EMT's

Obtain a peripheral blood specimen for blood glucose monitoring
Hypoglycemia protocol if suspected hypoglycemia

EMT I, P

Cardiac monitor
Vascular Assess procedure

EMT P

If hypertensive (two consecutive blood pressures with systolic > 190 or diastolic > 110),
hypertensive crisis protocol

The Cincinnati Pre-hospital Stroke Scale

Facial Droop (have patient show you teeth or smile):

- * Normal: Both sides of face move equally
- * Abnormal: One side of face does not move as well as the other side

Arm Drift (patient closes eyes and holds both arms straight out for 10 seconds):

- * Normal: Both arms move the same or both arms do not move at all (all findings, such as pronator grip, may be helpful).
- * Abnormal: One arm does not move or one arm drifts down compared with the other.

Abnormal Speech (have the patient say "you can't teach an old dog new tricks"):

- * Normal: Patient uses correct words with no slurring.
- * Abnormal: Patient slurs words, uses the wrong words, or is unable to speak.

Interpretation: If any 1 of these 3 signs is abnormal, the probability of a stroke is 72% according to the American Heart Association. Reporting and documentation should demonstrate these abnormal conditions.

Childbirth

Treatment

FR and EMT's

Treatment for normal delivery:

- a. Use clean and sterile technique
- b. Guide and control but do not retard or hurry delivery
- c. Suction mouth, then nose (not throat) with bulb syringe after head is delivered and before chest is delivered. If meconium is present be aggressive with suctioning
- d. Infant care: Keep infant level with perineum. Protect infant from falls and temperature loss
Wrap in clean or sterile blanket
- e. Institute resuscitation as needed; Obtain 1 minute APGAR
- f. Cutting the umbilical cord: Clamp cord 8" and 10" from infant. Cut the cord between the two clamps and inspect for bleeding
- g. Give infant to mother and allow suckling

If excessive bleeding occurs postpartum, massage the uterus

Do not pull on umbilical cord to hasten delivery of the placenta

EMT's

If not pushing or bleeding and delivery is not imminent, transport patient in left lateral recumbent position to prevent supine hypotension syndrome

Immediate transport indicated for previous C-section, known imminent multiple births
abnormal presenting parts, excessive bleeding, and premature birth

Transport: Do not wait for the delivery of the placenta. If it delivers prior to transport, bring it with you

Vital signs: Obtain maternal vital signs every 5 minutes. Complete APGAR score every 5 minutes for infant

Treatment for abnormal deliveries: place mother in trendelenburg or knee chest position. Gently elevate presenting part to relieve pressure on cord. Keep cord moist with saline gauze

EMT I, P

Vascular Assess procedure

If shock syndrome, follow shock protocol

EMT P

If meconium present consider direct tracheal suctioning before infant is stimulated

If airway problems follow airway protocol

APGAR Scale

	0 point	1 point	2 points
Heart rate	Absent	< 100	> 100
Respiration effort	Absent	Slow, irregular	Strong, crying
Muscle tone	Flaccid	Some flexing	Active motion
Irritability	No response	Some response	Vigorous response
Color	Blue, pale	Blue & pink	Fully pink
Infants with scores of 3 or less require aggressive resuscitation			

Hypertensive Crisis

Treatment

FR and EMT's

Airway protocol

EMT I, P

Cardiac monitor

Vascular Assess procedure

If hypertensive (two consecutive blood pressures >190 systolic and >110 diastolic) and patient is symptomatic,

OLMC for Nitro spray 0.4 mg SL with every 5 minutes

EMT P

OLMC for Morphine sulfate 2-5 mg IV every 5 min up to 10 mg, as needed monitoring BP

Hyperthermia

Treatment

FR and EMT's

Airway protocol

Remove clothing and place in a cool environment with good airflow over patient

EMT I, P

Cardiac monitor

Vascular Assess procedure

If shock syndrome consider shock protocol

Hypoglycemia

Treatment

FR and EMT's

Airway protocol

Glucose 15 grams by mouth for a confused patient that is able to maintain his/her airway

EMT's

Obtain a peripheral blood specimen for blood glucose monitoring

If blood sugar < 60 mg/dl administer Glucose 15 grams by mouth for a patient that is able to maintain his/her airway

EMT I, EMT P

Vascular Assess procedure

If in shock consider shock protocol.

Dextrose 50% IV 12.5 grams (25 ml), Repeat dose if no response to 1st dose after blood glucose monitor recheck. **Peds** < 8 y/o 0.5-1.0 grams (2-4 ml) / kg, **Peds** < 1 y/o = Dextrose 25%. 0.5-1.0 grams (2-4 ml) / kg

If unable to establish IV/IO, Glucagon 1 mg IM. **Peds** = 0.1 mg/kg up to 1 mg IM

Cardiac monitor

Hypothermia

Treatment

FR/EMT's

Primary survey protocol

Start CPR if not breathing and no pulse

Place AED, follow arrest protocol. (Three shocks only.)

Remove wet clothing and wrap in blankets to re-warm.

Avoid jarring and unnecessary stimulation in patients that are not shivering, this can trigger ventricular fibrillation.

Airway protocol

Check temperature if possible, rectal preferred

EMT I, P

Vascular Assess procedure

If in shock consider shock protocol

Cardiac monitor

For breathless and pulse less victim

Temperature = or $> 30^{\circ}\text{C}$ (86°F), follow airway and cardiac protocols with longer intervals for medications, repeat defib as core temperature rises.

Temperature $< 30^{\circ}\text{C}$ (86°F), CPR with three shocks only, No medication. Protect airway

Peds = Same as above

Poisonings and Overdoses

Treatment

FR/EMT's

Scene safe (is this a hazardous materials incident and is the hazard material team needed? If so call Oregon Emergency Response Services (OERS) 1-800-452-8311.)

External Contamination:

- Protect medical personnel

- Remove contaminated clothing

- Flush contaminated skin and eyes with copious amounts of water

Internal Ingestion:

- Contact poison control center (1-800-452-7165) if patient is stable for direction of treatment.

Airway protocol

EMT's

Obtain a peripheral blood specimen for blood glucose monitoring

- If blood sugar < 60 mg/dl, follow hypoglycemia protocol

Activated charcoal (after OLMC or Poison Control), Adult and **Peds** = 1 gram / kg PO or NG not to exceed 50 grams

EMT I, P

Cardiac monitor

Vascular Assess procedure

- If in shock consider shock protocol

Narcan 2 mg IV, IM, SQ every 5 min up to 8.0 mg for possible narcotic overdoses **Peds** = 0.1 mg/kg up to 2.0 mg IV, IM, SQ or ET every 5 mins up to 0.4mg/kg

Atropine 1-2mg IVP every 5 minutes, continue until clinical improvement has been achieved for possible organophosphate overdoses. **Peds** = 0.02 mg / kg IV (minimum dose 0.1 mg) every 5mins

EMT P

Sodium bicarbonate 1mEq/kg for possible tricyclic overdoses, **Peds** = 1mEq/kg IV

Diphenhydramine (Benadryl) 25-50 mg slow IV or IM for phenothiazine overdoses, **Peds** = 1-2 mg/kg slow IV or IM up to 25mg

Glucagon 2-4 mg for beta blocker overdoses after OLMC

Respiratory Emergencies

Treatment

FR and EMT's

Airway protocol, administer high flow oxygen, suction upper airway as needed Epiglottitis: Do not force patient to lie down. Do not attempt to evaluate oropharynx.

EMT's

Asthma, COPD and Pulmonary Edema: CPAP procedure

EMT I, P

Vascular Assess procedure

If shock syndrome is present consider shock protocol

Cardiac monitor

Asthma: Adult and *Peds* Nebulized Albuterol 2.5mg/3ml saline, repeat as needed Epinephrine 0.3mg SQ of 1:1000 or 1:10,000 IV, if the patient has history of past heart disease, or at high risk, or over 50 y/o. Only give after OLMC. *Peds* = 0.01 mg/kg SQ – Max 0.3 mg of epinephrine 1:1,000 or epinephrine 1:10,000 IV Nebulized Duoneb 3ml saline, *Peds* = 1.25ml. One dose

COPD: Nebulized Albuterol 2.5mg/3ml saline, repeat as needed maintain SaO₂ < 95%

Pulmonary Edema: Nitroglycerin 0.4mg SL, may repeat every 5 minutes if BP above 100 systolic

Croup: *Peds* = Nebulized saline 3mls by aerosol face mask if tolerated

EMT P

Pulmonary Edema: Nitroglycerin 0.4mg SL, may repeat every 5 minutes if BP above 100 systolic
If patient is hypotensive, Dopamine after OLMC. Start infusion between 5-10 mcg/kg/min and consider gradual increase 10-20 mcg/kg/minute titrated to hemodynamic effect

12 Lead for possible cardiac event or unknown cause

Seizure

Treatment

FR and EMT's

Nothing during seizure if duration < 2 minutes except protect patient from injury

Do not force anything in patient's mouth.

Airway protocol

Peds = Check temperature if possible -- rectal preferred.

EMT's

Obtain a peripheral blood specimen for blood glucose monitoring

If blood sugar < 60 mg/dl consider hypoglycemia protocol

EMT I, P

Vascular Assess procedure

If in shock consider shock protocol

Cardiac monitor

EMT P

If patient is seizing upon arrival or has prolonged seizure (> 2 minutes), or patient is in status seizure,

Versed 2.5 mg IV may repeat once to a maximum of 5 mg or 5 mg IM may repeat once to a maximum of 10 mg (if no IV access). **Peds** = 0.1 mg/kg IV may repeat once to a maximum of 5 mg or 0.2 mg/kg IM may repeat once to a maximum of 10 mg (if no IV access), recheck glucose level as patient will likely be hypoglycemic

If patient is pregnant and seizing, consider Versed as above then Magnesium sulfate 1 gram slow IV/IO push repeat every 5 minutes to total of 4 grams

Shock

Treatment

FR and EMT's

Airway protocol

Stop obvious bleeding

For anaphylactic shock see allergic reaction protocol

EMT I, P

Cardiac monitor

Vascular Assess procedure (large bore IV or FAST sternal IO)

Primary line administer with blood infusion set

Secondary line with macro tubing rate to keep blood pressure

Hypovolemic Shock:

Fluid challenge of 500cc if there are no signs of fluid overload

Repeat fluid challenge if there is no improvement or if improvement is transient

Peds = Fluid challenge 20 ml/kg (maximum of 500 cc). Repeat to a total maximum of 60 ml/kg as needed.

EMT P

Cardiogenic shock:

Right-sided MI may require fluid challenge

Dopamine after OLMC 5-10mcg/kg/min increase to 10-20mcg/kg/min, titrate to BP

Neurogenic shock:

Dopamine after OLMC 5-10mcg/kg/min increase to 10-20mcg/kg/min, titrate to BP

Septic shock:

Administer IV fluid challenge of a balance salt solution, repeat if necessary

Dopamine after OLMC, 2-5mcg/kg/min increase to 10-20mcg/kg/min, if shock is refractory to repeated IV fluid challenges. **Peds** = Dopamine Rate starts at 5 mcg/kg/min. Titrate to effect

Sick Person

Treatment

FR and EMT's

Airway protocol

If temperature is > 104 F follow hyperthermia protocol

EMT I, EMT P

Vascular Assess procedure

If shock syndrome consider shock protocol

Cardiac monitor

For nausea with vomiting Zofran 4 mg IV slowly or 4 mg IM, *Peds* = 0.1 mg/kg IV or 0.1 mg/kg

IM (max 4 mg), children <12 OLMC is required for nausea with vomiting