EMS Providers Manual

Baldwin AREA EMERGENCY MEDICAL SERVICES

Medication on board the trucks

Generic Name	Brand Name	Indication	Provider level
Adenosine	Adenocard	Conversion of PSVT to normal sinus rhythm	I,P,CCTP,RN
Albuterol	Proventil; Ventolin	For relief of acute bronchospasm	E,A, I,P,CCTP,RN
Amiodarone	Coradarone	VF/VT; WPW or PSVT with MD order	I,P,CCTP,RN
Aspirin	Bayer	Suspected cardiac ischemia	E,A, I,P,CCTP,RN
Atropine	N/A	Symptomatic bradycardia (including beta-blocker and/or calcium channel blocker OD); Asystole; PEA; Organophosphate overdose	I,P,CCTP,RN
Brilinta	Ticagrelor	Platelet inhibitor indicated to reduce the rate of thrombotic cardiovascular events in patients with ACS.	
Calcium Chloride	N/A	Symptomatic hyperkalemia, Hypocalcaemia, Calcium channel blocker overdose or toxicity, Respiratory depression following administration of magnesium sulfate	P,CCTP,RN
Dextrose 50%	N/A	Suspected or known hypoglycemia	A,I,P,CCTP,RN
Dextrose Oral	Glutose	Suspected or known hypoglycemia	MFR,E,I,P,CCTP, RN
Diazepam	Valium	Muscle relaxant, CNS Depressant	P,CCTP,RN
Diltiazem	Cardizem	Calcium Channel Blocker. Antagonist	P,CCTP,RN
Diphenhydramine	Benadryl	Allergic reaction, anaphylaxis, combative, Dystonia	P,CCTP,RN
Dopamine	Dopastat; Intropin	Symptomatic hypotension in the absence of hypovolemia	P,CCTP,RN
Epinephrine 1:1,000	Adrenaline	Allergic reactions; anaphylaxis	MFR,E,I, P,CCTP,RN
Epinephrine 1:10,000	Adrenaline	VF, pulseless VT, asystole, and pulseless electrical activity (PEA; severe anaphylaxis or asthma	E,A, I,P,CCTP,RN
Epinephrine, Racemic 2.5%		Moderate to severe croup; bronchial asthma; laryngeal edema	P,CCTP,RN
Etomidate	Amidate	Pharmacological paralysis in RSI; premedication for Cardioversion; CNS insult with suspected increased ICP	P,CCTP,RN
Fentanyl	Sublimaze	Pain control	P,CCTP,RN
Furosemide	Lasix	Diuretic	P,CCTP,RN
Glucagon		Hypoglycemia, beta blocker or calcium channel OD/toxicity	P,CCTP,RN
Haloperidol	Haldol	Acute psychotic disorders	P,CCTP,RN
Heparin		Management of Acute Myocardial Infarction (AMI) presenting with STEMI and/or Anticoagulant therapy	P,CCTP,RN
Hydromorphone	Dilaudid	Long acting analgesic	P,CCTP,RN
Ipratropium Bromide	Atrovent	Relief of acute bronchospasm.	E,A,I,P,CCTP,RN
Ketamine	Ketalar	Induction of anesthesia for RSI; control of the aggressive excited delirium patient, severe pain control.	P,CCTP,RN
Ketorolac tromethamine	Toradol	Pain control, Nonsteroidal anti-inflammatory drug (NSAID)	P,CCTP,RN
Lidocaine	Lidocaine	Anaesthesia for IO insertion	A, P,CCTP,RN
Lorazepam	Ativan	Anxiety; Seizure control; aggression; excited delirium	I,P,CCTP,RN
Magnesium sulfate	N/A	Torsades de pointes; severe asthma; seizures associated with eclampsia; contractions in premature labor; digitalis toxicity; tricyclic overdose	P,CCTP,RN
Methylprednisolone	Solu-Medrol	Adrenal corticosteroid	P,CCTP,RN
Metoprolol	Lopressor	Beta-adrenergic blocker	P,CCTP,RN
Midazolam	Versed	Agitation/discomfort of external pacing and cardioversion; agitation; status seizures; combative behavior that compromises patient care; anxiety	P,CCTP,RN
Morphine sulfate	N/A	Pain control.	I,P,CCTP,RN

Naloxone	Narcan	Respiratory depression from narcotic overdoses; diagnostic tool in coma of unknown origin	E,A,I,P,CCTP,RN
Nitroglycerine Drip		Chest pain of suspected cardiac origin; pulmonary edema; hypertension	P,CCTP,RN
Nitroglycerine Tablet/Spray	Nitro-Bid, Nitro-Dur, Nitrol	Chest pain of suspected cardiac origin; pulmonary edema; hypertension	B,A,I,P,CCTP,RN
Nitrous oxide	Nitrox	Pain management	P,CCTP,RN
Ondanestron hydrochloride	Zofran	Nausea or vomiting	P,CCTP,RN
Oxygen	N/A	Increase arterial oxygen tension (SaO2)	MFR,E,A,I, P,CCTP,RN
Rocuronium bromide	Zemuron	Additional muscle paralysis following RSI; head injuries with agitation or uncontrolled motor activity. Initial paralytic when succinylcholine is contraindicated (Physician order only)	P,CCTP,RN
Sodium bicarbonate	N/A	Acidosis/acidemia from cardiac arrest; pre-existing metabolic acidosis hyperkalemia; agitation delirium associated with cocaine or methamphetamine use	P,CCTP,RN
Succinylcholine	N/A	Paralysis for RSI	P,CCTP,RN
Terbutaline Sulfate	Brethine	Bronchial asthma, spasm associated with exercise and/or COPD	P,CCTP,RN
Vasopressin		Peripheral vasoconstriction	I,P,CCTP,RN
Vecuronium bromide	Norcuron	Additional muscle paralysis following RSI; head injuries with agitation or uncontrolled motor activity	P,CCTP,RN

Transport Medications

Back to Index ↑

Generic Name	Brand Name	Indication	Provider level
Alteplase (tPA)	Activase	Tissue plasminogen activator (tPA) is a class of drugs responsible for promoting the breakdown of blood clots (thrombolysis).	P,CCTP, RN
Ampicillin Sulbactam	Unasyn	Antibiotic: Monitor for inter-facility transports only.	P,CCTP, RN
Anzemet	Dolasetron	Nausea and vomiting	P,CCTP,RN
Azithromycin	Zithromax.	Antibiotic: Monitor for inter-facility transports only.	P,CCTP,RN
Ceftriaxone	Rocephin	Antibiotic: Monitor for inter-facility transports only.	P,CCTP,RN
Ciprofloxacin	Cipro	Antibiotic: Monitor for inter-facility transports only.	P,CCTP,RN
Compazine	Prochlorperazine	Antiemetic, GI Stimulant	P,CCTP,RN
Enalapril	Vasotec	ACE inhibitor	P,CCTP,RN
Esomeprazole	Nexium	Proton pump inhibitor works by decreasing the amount of acid produced by the stomach	P, CCTP, RN
Fosphenytoin	Cerebyx	Water-soluble prodrug of phenytoin used to treat repetitive epileptic seizures	P, CCTP, RN
Flumazenil	Romazicon	Reversal of sedative effects of benzodiazepines	P,CCTP,RN
Gentamicin Sulfate		Antibiotic: Monitor for inter-facility transports only.	P,CCTP,RN
Imipenem/ Cilastatin	Primaxin	Antibiotic: Monitor for inter-facility transports only.	P,CCTP,RN
Integrilin	Reopro, Aggrastat	Cardiac patients with signs/symptoms of ischemia or AMI.	P,CCTP,RN
Insulin	Humulin-R, Novolin-R, Humalog	Hormone produced by the body that is responsible for the regulation of blood glucose levels.	P, CCTP, RN
Metoclopramide	Reglan	Antiemetic, GI Stimulant	P,CCTP,RN
Moxifloxacin	Avalox™	Antibiotic: Monitor for inter-facility transports only.	P,CCTP,RN
Nicardipine	Cardene	Relaxes vascular smooth muscle and increases cardiac output, coronary blood flow and oxygen supply without increasing cardiac oxygen demand.	P, CCTP, RN
Norepinephrine	Levophed	Stimulates alpha-receptors in arterial and venous beds	P,CCTP,RN

		and $beta_1$ receptors of the heart.	
Packed Red Blood	Blood	For blood replacement	P,CCTP,RN
Pantoprazole	Protonix	Proton pump inhibitor works by decreasing the amount of acid produced in the stomach.	P,CCTP, RN
Piperacillin-tazobactam	Zosyn™	Penicillin-type antibiotics used to treat a wide range of bacterial infections	P,CCTP,RN
Potassium	K	Used in cases of Hypokalemia	P, CCTP, RN
Proparacaine	Opthane	Suspected corneal abrasion; burns or foreign body in eye	P,CCTP,RN
Promethazine	Phenergan	Antihistamine, Antiemetic	P,CCTP,RN
Propofol	Diprivan™	Sedation for RSI	P, CCTP, RN
Thiamine	Vitamin B1	Allows break down of glucose	P,CCTP,RN
Total Parenteral Nutrition	TNP	Provides all daily nutritional requirements	P, CCTP, RN
Vancomycin	Vancocin	Antibiotic: Monitor for inter-facility transports only.	P,CCTP,RN

Introduction

Baldwin Area Medical Center is our Medical Control Hospital. Emergency Care Consultants is the Certified Emergency Physicians group providing medical direction to our service.

This document contains the guidelines and protocols for pre-hospital care for MEDICAL FIRST RESPONDER (MFR), EMERGENCY MEDICAL TECHNICIAN (EMT), ADVANCED EMT, INTERMEDIATE, PARAMEDIC, REGISTERED NURSE and CRITICAL CARE TRANSPORT PARAMEDIC. This document establishes standards of care that conform to the current guidelines of the State of Wisconsin and is intended for pre-hospital personnel that have been properly trained and authorized to administer care within the scope of practice of licensure.

The patient care guidelines are not intended to be absolute treatment doctrines, but rather guidelines with sufficient flexibility to meet the needs of complex cases and to provide guidelines for patient care in the event of emergencies & disasters and act as standardization in the event Medical Control is unavailable.

The patient care guidelines are divided by level of the provider. Those of more advanced training are expected to ensure that the interventions of the previous levels have been performed. All levels of providers may operate under these protocols without on-line medical control, unless specifically mentioned. In the event that communications cannot be established with Medical Control, pre-hospital personnel shall continue to provide treatment to the degree authorized by the Medical Director in these guidelines.

All guidelines assume that EMS Personnel will follow appropriate scene safety and BSI precautions, and will operate within their scope of practice as trained by authorized training centers and Medical Direction.

Medical Control may be contacted at any time if the pre-hospital provider has questions or concerns, needs guidance or advice. It is expected that each level of provider request appropriate additional resources. Resource requests should be made as early as possible to maximize potential interventions and patient outcomes.

The enclosed guidelines are approved for use by EMS personnel of Baldwin Area EMS effective December 31, 2015.

_____ _____

Tom Boyer, NRP
EMS Chief
Baldwin Area EMS

Joseph Wahlberg, M.D./FACEP
Medical Director

Back to Index ↑

Department Policies & Plans

Continuing Education Policy

The maintenance of skill is of paramount importance in providing high levels of patient care.

Baldwin Area EMS provides local training on a monthly basis for the purpose of maintaining National Registry of EMT's certification and State of Wisconsin Licensure as required by Medical Direction. The training also covers requirements of the Village of Baldwin as your employer to meet standards of other regulatory agencies on a biennium basis.

The Baldwin Area EMS must file a copy of each of the following documents:

a. Wisconsin license
b. Current CPR Professional or Health Care Provider card.
c. Current ACLS, PEPP or PALS certification cards. (WI does not allow hand written cards)
d. Current WMD, HazMat awareness, and Blood Borne Pathogens training certificates.
e. NIMS training certificates.
f. Copy of any other professional health care license or certificate required for the level of service you are operating at.
g. Current vaccinations (as required by training centers and clinical sites)

Required Refresher Training:
Our refresher and other training are conducted by WI authorized training centers which include Regions EMS, WITC, CVTC, and other approved TC's. It is vitally important for you to attend all training to be assured you will meet refresher and renewal requirements. Some of these training sessions can be made up, others cannot. Check with your Training Officer several days prior to missing any session.

The service provides all training free of charge to employees. If you miss training and fail to make it up, you will need to find a Wisconsin approved refresher or training courses in order to maintain your license or certification. The cost of that refresher or makeup course will be your expense. Documentation must be provided to the Training Officer upon completion of any makeup session.

Note: Completion of a full EMS course (upgrading to a higher level of care) during the biennium fulfills all refresher requirements for state licensure.

Quarterly, annual and bi annual testing of certain skills by level is conducted by Medical Director or designee (Technical College or Regions EMS Training Center).

Level	WI Approved refresher Bi-annual	Additional CME for NREMT Bi-annual	Maintain current HCP CPR Bi-annual	Maintain current ACLS Bi-annual	Maintain PALS or PEPP Bi-annual	BBP/Fit Test N-95 Annually	OSHA Right to know- Annually	EVOC/CEVO/Driver training Bi-annual	HazMat Awareness Bi-annually	WMD refresher bi-annual	IV Skills test out – 2 x annual	Advanced Airway test out Annual (Patient/OR or Simulation)	RSI Skills test out – live or simulation - annual	CCTP advanced skills check off – annual	Medication Review by Scope Annually by Tech College
EMR	16 hrs.	8	✓	N/A	✓	✓	✓	✓	✓	✓	N/A	N/A	N/A	N/A	✓
EMT	30 hrs.	48	✓	N/A	✓	✓	✓	✓	✓	✓	N/A	✓	N/A	N/A	✓
AEMT	36	48	✓	N/A	✓	✓	✓	✓	✓	✓	✓	✓	N/A	N/A	✓

	hrs.														
Intermediate	48 hrs.	24	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	N/A	N/A	✓
Paramedic	48 hrs.	24	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	N/A	✓
CCTP/RN	48 hrs.	36 CCTP specific	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	*Including CCTP Specific*

END

Back to Index ↑

Student ride along

EMS Student Ride-Along definition: Someone who has provided the EMS Chief with a training permit, immunizations, CPR card, and signed our privacy policy but has not been hired by Baldwin Area EMS. The student must be from a pre-approved training program or affiliated agency. Ride-along students are not paid.

General Guidelines:

1. Any individual who rides with Baldwin Area EMS will be under the direct supervision of the crew to which they are assigned. The preceptors can refuse to begin or complete the rider's shift if the preceptors are uncomfortable with the participant's actions, mode of dress, attitude or has experienced previous poor performance with the rider.
2. No riders will be allowed without having scheduled in advance, they can call the station to schedule a shift. If you need to cancel your shift, you must contact the duty officer at 715-760-1491. All requests for Ride-Along must be pre-approved.
3. Please arrive at the station ten minutes early for assigned shifts and be dressed appropriately. Be aware that a crew may be called out right at the beginning of the shift and may not return to the base for an extended period of time.
4. Be sure to bring food or money to buy your meals. There is a refrigerator and a full kitchen at the station.
5. Riders must comply with all employee policies, reviewed with FTO before first ride along.

Dress Code:

In order for patients, first responders, and others to identify the rider as a part of the team you must wear the following:

1. Solid white button down shirt (with a collar). Tee shirts/sweatshirts are NOT acceptable. Plain white t-shirts are required to be worn underneath the white shirt.
2. Dress slacks of a dark color (black or navy blue) with dark socks. Blue jeans, denim pants are NOT acceptable. EMS pants are encouraged.
3. Black heavy-toed boots are recommended to prevent injury, but tennis shoes are acceptable as long as they have a closed toe and are in good shape. All footwear must be properly secured to the feet.
4. Students or riders from other EMS agencies may NOT wear that uniform or jacket.

Rider Procedures:

1. **Riders must read and sign a "consent and release" form. See forms section.**
2. Riders are not allowed to carry radios or pagers.
3. All riders will comply with workplace violence and sexual harassment policies.
4. Riders must follow all orders concerning patient care.
5. Riders must practice only at their certification/Permit level as approved by school and this department.
6. Riders will be given a station tour, ambulance orientation and review of any emergency procedures at the beginning of the shift.
7. Riders are not allowed to drive vehicles.
8. Riders may be asked to remain in the ambulance if required for your safety.

9. Riders will be seat belted while the vehicle is moving. There is the exception where involvement in patient care may dictate the need to remove the seatbelt. Use good judgment.
10. Patient care is our top priority. If a critical patient is encountered, the crew may seem to exclude the rider. Be alert to what is happening since your assistance may be crucial in the overall effort of patient care.
11. Riders must remain in the back during general driving and in response to calls.

END

Back to Index ↑

Emergency Vehicle Operation and Drivers Training

Purpose: The purpose of this policy is to coordinate the efficient response of personnel and emergency vehicles to the scene of an emergency while minimizing risk to persons and property. The driver of each vehicle bears full responsibility for adherence to this policy. State and local laws may exempt authorized emergency vehicles from regular traffic laws when the vehicles are responding to an emergency. However, neither state and local laws nor this procedure absolve the driver of an emergency vehicle from the responsibility of driving with due regard for the safety of others on the road. The driver remains fully accountable for his/her actions. Safety should not be sacrificed in order to increase the speed of the response.

Driving Training: Only personnel who have completed the service's driver training and are approved by the EMS Chief may operate service vehicles, unless a person operates a vehicle under supervision as part of the driver training program. Baldwin Area EMS hires instructors to train personnel using Emergency Vehicle Operators Course (EVOC) or Coaching the Emergency Vehicle Operator (CEVO). Failure to pass one of these driving courses when they are offered will result in the staff member losing their ability to drive any piece of equipment. If staff member cannot pass the driving course after more than one attempt, it is up to the Chief's discretion, but the employee could be terminated.

Driver Background: All emergency vehicle operators shall have an acceptable driving record annually. Driving privileges can be revoked at the Chief's discretion if the Chief feels the staff member has been driving in an unsafe manner.

Seat Belts: All persons shall use the vehicle's safety belts. All personnel in charge of a service emergency vehicle will insure that all passengers use safety belts whenever the vehicle is in motion. All personnel in the patient care area shall be seat-belted at all times unless this interferes with essential patient care.

Exiting the Station: The driver shall be aware of other emergency vehicles leaving the station at the same time. Vehicles traveling to the same location should respond using the same route when practical. Emergency vehicles shall not travel closer than 500 feet of each other, and they shall utilize different warning tones.

Warning Devices: All audible and visual warning devices shall be in operation when making an emergency response. Headlamps should be turned on whenever the ambulance is in operation for added safety.

Speed: Under ideal conditions (light traffic, dry roads, and excellent visibility), the maximum speed of any responding vehicle shall be reasonable and prudent with consideration of the posted speed limit. The driver shall always maintain a speed consistent with safe operation of the vehicle under the prevailing conditions.

Driving Left of Center: Driving in the center turning lane or left of center is extremely dangerous and shall be avoided whenever possible. If it is necessary to drive in them, the maximum permissible speed shall be prudent and reasonable, considering the increased possibility for the need to stop.

Intersections: Intersections are the most dangerous areas to approach during an emergency response. The following special precautions shall be observed by all responding vehicles: When an emergency vehicle must

approach an intersection in the center lane or left of center, the driver shall maintain an ability to come to a *complete stop* until all other traffic in the intersection has yielded. This applies even when the emergency vehicle has a green light at a controlled intersection.

Passing on the Right: Passing vehicles on the right is a dangerous maneuver that shall be avoided.

Backing: Avoid backing up whenever possible. If backing is necessary: 1. Always backup upon arrival preparing for rapid egress. 2. Use a guide. 3. Open driver's window to hear guide. 4. If you lose sight of the guide, stop immediately and re-establish line of sight.

Parking: Curb the wheel when possible, set the parking brake to prevent rollaway/run away vehicle.
END

Back to Index ↑

Critical Incident Stress Management

PURPOSE

The purpose of a Critical Incident Stress Management (CISM) is to provide support and professional intervention after emergency personnel have been subjected to a significant traumatic event. CISM is designed to mitigate the impact of a critical incident and accelerate the mental healing process. Each situation is different and the process below may not always apply. You must notify the chief should you wish help. Other crewmembers should always be alert and notify the chief should you see another EMT in need.

OVERVIEW OF CISM

1. CISM teams are designed and implemented to specifically address the needs of emergency personnel, thus assuring that the very best support services are provided. The team is comprised of licensed mental health professionals and peer support personnel drawn from fire, EMS, police, dispatchers, nursing, disaster management, etc.
2. Peer support members are volunteers who have had received training in a CISM training course. They are selected to participate in the CISM Team because they are trained, have the respect of their peers, are mature and care about the well-being of their fellow emergency workers. Peer support personnel perform the following:
    a. Initiate the first contact with those who have responded to the scene of a critical incident.
    b. Assess the need for defusing or debriefings.
    c. Contact the CISM Team Leader to begin the process of organizing a debriefing.
    d. Call for mental health support when their training and resources are exceeded.
    e. Assist with CISM-related educational activities.

Critical Incident Stress Management Teams

a. CISM teams are designed and implemented to specifically address the special personalities, stressors, and needs of emergency personnel, thus assuring that the very best support services are provided.
b. Information shared during any part of the CISM process is confidential and will not be utilized for any purpose other than the benefit of the individual(s) involved.
c. Critical Incident Stress Management involves on scene support, demobilization for large-scale events, defusing, debriefings, and awareness education.

1. On-Scene Support

Peer Support personnel play a key role in providing on-scene support services to distressed emergency workers. There are generally three things peer support personnel may handle at the scene:

a. Brief assistance to obviously distressed co-workers.
b. Advice to the command staff as the situation warrants.

c. Brief assistance to victims and their family members to reduce interference with operations. Once other appropriate victim-oriented agencies arrive, the care of distressed victims is turned over to the qualified agencies.

2. Demobilization Support

a. This intervention is reserved for large-scale events.
b. Demobilization support takes place at a site away from the scene when the work is completed.
c. The entire process takes about 30 minutes and is coordinated by a mental health professional.

Personnel are given information about stress and the typical signs and symptoms people experience.

3. Defusing's

a. Defusing are small group processes that involve personnel from the initial arriving unit(s).
b. Defusing is much shorter, less formal, and less structured than a debriefing. They are given within a few hours of the event and usually last about 30 to 40 minutes.
c. The main purpose of a defusing is to stabilize the on-duty personnel so they can return to normal service or, if they are at the end of the shift, allowed to go home without unusual stress.
d. Defusing allow personnel an initial forum to ventilate their reactions to a critical event. It also provides for stress related information to be distributed.
e. Defusing are typically managed by peer support personnel, preferably from outside the involved agency, but may be led by a mental health person if peer support personnel decide that it is necessary.
f. Defusing will accomplish one or two major goals in reference to the formal debriefing process. A well run defusing will either eliminate the need to provide a formal debriefing, or it will enhance the formal debriefing.

4. Debriefings

Debriefings are structured group meetings that emphasize ventilation of emotions and other reactions to a critical event. In addition, they are educational discussions designed to address the impact of stress producing situations and their effects on the emergency service personnel. Debriefings are essentially discussions of the critical incident in a confidential meeting. They are not considered psychotherapy, nor are they psychological treatment. Instead, debriefings are discussions designed to put a bad situation into perspective. The two major goals of debriefings are to:

1. Reduce the impact of a critical event.
2. Accelerate the recovery of normal people who are suffering through normal but painful reactions to abnormal events.

Debriefing Guidelines:

a. All members must be off-duty (or relieved of duty) to participate in CISM activities.
b. The formal debriefing process will include only the members that were involved in the incident. This may include multiple agencies, such as police, fire, communications, specialty crews, etc.
c. CISM will be in a "quiet" place preferably away from the scene and/or agency. Radios and pagers will be turned off during the CISM process.
d. There will be no written, audio or video record of CISM activities.
e. The CISM process is CONFIDENTIAL. Only personnel involved with the incident are permitted to attend.
f. Debriefings are not a critique of the incident and thus will not allow specifics to be addressed.
g. The formal debriefing process achieves its best effects when it is offered after 24 hours and before 72 hours following a critical incident. However, when necessary, debriefings have been performed up to eight weeks after an incident.

5. Educational Awareness

The CISM team is active in pre-hospital stress education and prevention programs. The team serves as a resource and referral network for emergency personnel who need more support than can be provided by a debriefing. Family education and support programs are also an integral part of the team effort.

CRITICAL INCIDENT PROCESS
Critical incidents can be any event with sufficient impact to overcome the usual coping abilities of emergency personnel. Effects could be immediate or delayed.

There are a number of criteria to which an employee, supervisor, peer support personnel or command staff might decide to request or provide CISM to personnel after a critical incident. The final decision to conduct a formal debriefing will be made by the CISM Team Leader or Baldwin EMS Chief or designee, after consultation with the affected personnel.
The following incidents may require a CISM team:

a. Line of duty death.
b. Suicide of an emergency worker.
c. Serious injury to an emergency worker.
d. Serious multi-casualty disaster.

Other types of incidents where the need for CISM may be useful include:

a. Significant event involving pediatrics.
b. Incidents where personnel may know the victim.
c. Police involved shooting.
d. Prolonged incident with loss of life.
e. Incident with excessive media interest.
f. Any other significant event having and unusually powerful impact on emergency personnel.

Some individual signs that need to be considered include:

a. Many personnel appearing distressed after being involved with a particular incident.
b. Behavioral changes noted in a person after a critical event.
c. Personnel noted making significant errors on calls occurring after a critical incident.

CISM ACTIVATION PROCESS
Requesting crewmember of EMS contacts the EMS Chief.
The chief shall supply the following information to the CISM team:

a. Agency(s) requesting the CISM team.
b. Type of incident.
c. Number of members involved.
d. Call back contact number or pager/cell number.

END

Back to Index ↑

National Incident Management System (NIMS)

The NIMS Integration Center was established by the Secretary of Homeland Security to provide "strategic direction for and oversight of the National Incident Management System… supporting both routine maintenance and the continuous refinement of the system and its components over the long term."

The NIMS is a comprehensive incident response system developed by Homeland Security at the request of the President of the United States. The NIMS Integration Center will oversee all aspects of the NIMS, including the development of NIMS-related standards and guidelines and the provision of guidance and support to incident management and responder organizations as they implement the system. The Center also will validate compliance with the NIMS and National Response Plan responsibilities, standards and requirements.

The NIMS Integration Center is a multi-jurisdictional, multidisciplinary entity made up of federal stakeholders and over time state, local and tribal incident management and first responder organizations. It is situated at the Department of Homeland Security's Federal Emergency Management Agency (FEMA). The organization of the Center includes the following branches:

- Standards and Resources
- Training and Exercises
- System Evaluation and Compliance
- Technology, Research and Development
- Publications Management

Baldwin Area EMS recognizes NIMS as the official incident management system and will train personnel to the following levels:

EMT's must obtain ICS 100, 200 and 700.
Chief, Assistant, and Duty Officers shall obtain ICS 300 and 400.

NIMS has been incorporated into the EOP (Emergency Operations Plan) for the Village of Baldwin.

END

Back to Index ↑

Safe Haven for Newborns

The Safe Haven for Newborns law was passed to provide a safe place for unwanted newborn babies in lieu of abandonment, injury, or death. The law states that a law enforcement officer, EMT, or hospital staff member may take into custody any child they reasonably believe is **72 hours old or younger**, where the parent of the child relinquishes custody and does not express any intent to return the child.

The Baldwin EMS Department, in compliance with the Safe Haven for Newborns law (2001 Wisconsin Act 2) will provide confidential protective shelter, medical care, and treatment to babies up to 72 hours old.

When a mother approaches **ANY** Baldwin EMS Department volunteer or employee and indicates she wants the baby to be accepted into the Safe Haven program, the volunteer or employee is to accept the baby from the mother.

PROCEDURE:

1. Accept the newborn baby from the mother
2. Do not ask the mother for her name or any identification
3. There is no need to notify the police
4. Provide the person dropping the baby off with an envelope of information (on clipboard in station) and ask that the birthmother complete the questions here, or mail back it to the Baldwin EMS Department

Transport the baby to the Baldwin Area Medical Center Emergency Department without delay.

END

Back to Index ↑

Exposure Control Plan

The Baldwin EMS Department is committed to providing a safe and healthful work environment for our entire staff. In pursuit of this endeavor, the following exposure control plan (ECP) is provided to eliminate or minimize occupational exposure to bloodborne pathogens in accordance with OSHA standard 29 CFR 1910.1030, "Occupational Exposure to Bloodborne Pathogens" and also incorporates tuberculosis cases into the plan.

This ECP is a key document to assist our organization in implementing and ensuring compliance with the standard, thereby protecting our employees. This ECP includes:
Program Administration
Determination of employee exposure

Implementation of various methods of exposure control including:

1. Universal Precautions
2. Engineering and work practice controls
3. Personal protective equipment
4. Housekeeping

Ambulance Cleaning Procedure
Equipment Cleaning Procedure

1. Hepatitis B vaccination and antibody testing when appropriate.
2. Post-exposure evaluation and follow-up
3. Administration for post-exposure evaluation and follow-up
4. Evaluating the circumstances surrounding an exposure
5. Communication of hazards to employees and training.
6. Recordkeeping
7. Tuberculosis Policy
8. Definitions

The methods of implementation of these elements of the standard are discussed in the subsequent pages of this ECP.

PROGRAM ADMINISTRATION

The Chief, Assistant Chiefs, or Duty Officer, hereafter designated as the Officers, are responsible for the implementation of the ECP. The Officers of the service will maintain, review, and update the ECP at least annually, and whenever necessary to include new or modified tasks and procedures.

Assistant Chiefs are classified as the "Infectious Control Officer" for the Baldwin EMS Department. This person will be responsible to oversee all bloodborne pathogens for the service and record them appropriately.

All employees who are determined to have occupational exposure to blood or other potentially infectious materials (OPIM) must comply with the procedures and work practices outlined in this ECP.

The Baldwin Area EMS Department will maintain and provide all necessary personal protective equipment (PPE), engineering controls (e.g. sharps containers), labels, and red bags as required by the standard. The Second Assistant Chief will ensure that adequate supplies of the aforementioned equipment are available in the appropriate sizes. The Officers will be responsible for ensuring that all medical actions required are performed and that appropriate employee health and OSHA records are maintained.

The Officers will be responsible for training, documentation of training, and making the written ECP available to employees, OSHA, and NIOSH representatives. If it is determined that revisions need to be made, the Officers will ensure that appropriate changes are made to this ECP. (Changes may include an evaluation of safer devices, adding employees to the exposure determination list, etc.

EMPLOYEE EXPOSURE DETERMINATION

The following is a list of all job classifications within our organization in which all employees have occupational exposure:

1. EMT's (Medical Responder, EMT Basic, Intermediate Technician, Intermediate, Paramedic)
2. Maintenance Personnel, Ride Along Students, and Explorers.

The following is a list of job classifications in which outside organizations have the potential for occupational exposure with our organization:

1. Baldwin Area First Responders.
2. United Fire Department Personnel.
3. Local Police and Sheriff Department Personnel.
4. Baldwin-Woodville and St. Croix Central Athletic Trainers.
5. Any mutual aid pre-hospital or hospital personnel, which may be on scene.

METHODS OF IMPLEMENTATION AND CONTROL

Universal Precautions

All employees within Baldwin EMS will utilize universal precautions:

1. Jumpsuits or uniforms must be worn on every run. Jackets maybe worn in addition to these.
2. Gloves will be worn on every call prior to attending to a patient.
3. Every attendant will wash their hands after removing gloves, preferably at the location the patient was delivered.
4. Gloves will be disposed of properly, in a waste receptacle if unsoiled, in a biohazard bag if possibly soiled with infectious waste.
5. CPR will be performed with a Microshield, pocket mask, bag valve or positive pressure mask.

Exposure Control Plan

All employees covered by the bloodborne pathogens standard receive an explanation of this ECP during their initial training and orientation session. The plan will also be reviewed in employee's annual refresher training. All employees have access to this plan at any time by looking it up in the procedure book located in each of the ambulances, in the office or in the training room. A copy of the ECP will be provided to any employee that requests one. The copy will be submitted to the employee within 15 working days of the request.

The Officers are responsible for reviewing and updating the ECP annually or more frequently, if necessary, to reflect any new or modified tasks and procedures which affect occupational exposure and to reflect new or revised employee positions with occupational exposure. The annual update documentation will include:

1. An assessment of technology changes that can reduce exposures.
2. An assessment of appropriate commercially available and effective safer medical devices designed to eliminate or minimize occupational exposure.
3. Methods used for soliciting the input from non-managerial employees in the identification, evaluation and selection of effective engineering and work practice controls.

Engineering Controls & Work Practices

Engineering controls and work practice controls will be used to prevent or minimize exposure to bloodborne pathogens. The specific engineering controls and work practice controls used are listed below:

1. Protect IV needles
2. Needle-less IV system
3. Needle safe syringes
4. Needle safe lancets

Sharps containers are inspected, maintained or replaced by the Assistant Chief biweekly or whenever necessary to prevent overfilling

Baldwin Area EMS identifies the need for changes in engineering control and work practices through reviewing past OSHA records, employee interviews and training activities.

Our Department evaluates the need for new products/procedures through open discussion at monthly meetings and through training activities. The Officers and all employees are involved in this process.

The Chief will ensure effective implementation of these recommendations.

Personal Protective Equipment

PPE is provided to our employees at no cost to them. Training is provided by the Officers in the use of the appropriate PPE for the tasks or procedures employees will perform.

The types of PPE available to employees are as follows:
1. Non-disposable = Jumpsuits, uniforms and jackets
2. Disposable = gloves, gowns, booties and eye protection.

All disposable PPE is located inside the ambulances and storage room in the building. The officers of the service are responsible for ensuring appropriate disposable PPE is available to employees. Employees are responsible to notify an officer if they know of a deficiency or problem with any disposable PPE.
All employees using PPE must observe the following precautions:

1. Wash hands immediately or as soon as feasible after removal of gloves or other PPE.
2. Never wash or decontaminate disposable gloves for reuse.
3. Remove PPE after it becomes contaminated and before leaving the work area.
4. Used PPE may be disposed of in the garbage unless contaminated with infectious substances then they must be disposed of in a red biohazard bag.
5. Wear appropriate gloves when it can be reasonably anticipated that there may be hand contact with blood or OPIM and when handling or touching contaminated items or surfaces.
6. Replace gloves if torn, punctured, contaminated, or if their ability to function as a barrier is compromised.
7. Utility gloves may be decontaminated for reuse if their integrity is not compromised. Utility gloves must be discarded if there are any signs of cracking, peeling, tearing, puncturing, or deterioration.
8. Wear appropriate face and eye protection when splashes, sprays, spatters, or droplets of blood or OPIM pose a hazard to the eye, nose or mouth.
9. Remove immediately or as soon as feasible any garment contaminated by blood or OPIM, in such a way as to avoid contact with the outer surface of other garments or your skin.

The procedure for handling used PPE is as follows:
Non-Disposable

1) Upon contamination of ambulance personnel's clothing/garments, the contaminated item(s) must be removed as soon as possible and placed into a biohazard bag. The Infection Control Officer must be notified immediately so the appropriate actions may be taken.
2) Any other non-disposable PPE may be washed at the ambulance station as needed.
   Disposable

All disposable PPE is discarded. Non-contaminated PPE may be discarded in general garbage. All contaminated PPE should be discarded in red biohazard bags/containers located in each ambulance and at the hospital.

Housekeeping

Regulated waste is placed in red biohazard containers, which are closeable, constructed to contain all contents and prevent leakage. The containers shall be closed prior to removal to prevent spillage or protrusion of contents during handling.
Sharps disposal containers should be placed in the red biohazard containers at Baldwin Area Medical Center. No full sharps containers shall be discarded at the ambulance station.

Contaminated sharps are discarded immediately or as soon as possible in containers that are designated as sharps containers. The containers should be closable, puncture resistant, leak proof and labeled as biohazard sharps. Sharps containers are located in each ambulance on the counter and in the medical kits. If needle recapping is indicated, it should be done with a one handed technique. The cap should then be taped on to prevent further exposure to the needle.

Emesis basins should be discarded in red biohazard containers at Baldwin Area Medical Center.

Broken glassware, which may be contaminated, is picked up using mechanical means, such as a brush and dustpan and disposed of in an appropriate sharps container.

Labels

The following labeling methods are used by Baldwin EMS:

EQUIPMENT TO BE LABELED	LABEL TYPE
1. Contaminated laundry and specimens	Red biohazard bags with biohazard label
2. Contaminated sharps	Red biohazard sharps container w/ bio label
3. All contaminated disposable equipment (Suction catheters, containers, etc.)	Red biohazard bags with biohazard label

The Officers will ensure warning labels are affixed or red bags are used as required, if regulated waste or contaminated equipment is brought into the facility. Employees are to notify the infectious control officer if they discover regulated waste containers, contaminated equipment, etc. without proper bags or labels.

Ambulance Cleaning Procedures

1. Adhere to all universal precautions.
2. Wear heavy rubber gloves to clean the ambulance.
3. Check surfaces of the ambulance for blood/body fluids and dispose of properly.
4. Use commercial detergent provided by the service or hospital for cleaning. (i.e. Cavicide)
5. Wash surfaces inside of the ambulance after each run or as needed. (include gurney)
6. Allow surfaces to air dry.

Potential Exposure Situation Protocol

1. Adhere to all universal precautions.
2. For potentially infectious body fluids:
    a. Soak up fluid with a paper towel and dispose of in a biohazard bag.
    b. Spray all surfaces, except floor, with disinfectant (Cavicide) and wipe clean.
    c. scrub floor with bleach solution
3. For airborne infectious diseases:
    a. Spray all surfaces, except floor, with disinfectant (Cavicide) and wipe clean.
    b. Spray the air with a disinfectant spray (e.g. Lysol).
    c. Scrub floor with bleach solution.
    d. Open doors to allow the ambulance to become well ventilated.

Equipment Cleaning Procedures

Single Use Equipment

1. All single use equipment will be treated as if contaminated.
2. Dispose of <u>all</u> single use equipment that has been in contact with a patient in biohazard bags or containers.

Non-Disposable Equipment

1. Wash all non-disposable equipment with either a 4:1 water to bleach solution or a Cavicide solution.

Potential Exposure Situation Protocol

1. Follow all universal precautions.
2. Dispose of all needles or sharps in a red sharps container immediately after use.
3. Dispose of all fluids in the toilet at the hospital.
4. Wash all non-disposable equipment thoroughly with soap and water to remove fluid.
5. Clean all non-disposable equipment thoroughly with Cavicide or any other approved disinfectant.

HEPATITUS B VACCINATION

The Baldwin EMS Department will provide training to employees on hepatitis B vaccinations, addressing the safety, benefits, efficacy, methods of administration, and availability.

The hepatitis B vaccination series is available at no cost after EMS orientation and within 10 days of initial assignment to employees identified in the exposure determination section of this plan. Vaccination is encouraged unless:

1. Documentation exists that the employee has previously received the series.
2. Antibody testing reveals that the employee is immune.
3. Medical evaluation shows that the vaccination is contraindicated.

However, if an employee chooses to decline vaccination, the employee must sign a declination form. Employees who decline may request and obtain the vaccination at a later date at no cost. Documentation of refusal of the vaccination is kept in the employee's medical record file at the Ambulance Station.

Vaccination will be provided by Baldwin Area Medical Center or St. Croix County Department of Health.

Following hepatitis B vaccinations, the health care professional's written opinion will be limited to whether the employee requires the hepatitis vaccine, and whether the vaccine was administered.

One to two months following the HBV vaccination series, EMS personnel will be tested for HBV surface antigens as indicated in MMWR.

Antibody testing for response to hepatitis B surface antigen will be provided by Baldwin Area Medical Center, 730 10th Avenue, Baldwin WI 54002.

POST-EXPOSURE EVALUATION & FOLLOW-UP

Should an exposure incident occur, immediately contact an officer of the service. (Preferably the infectious control officer.)

An immediate and confidential medical evaluation and follow-up will be conducted by Baldwin Area Medical Center. Following the initial first aid of cleaning the wound, flushing the eyes, or mucus membranes, etc., the following activities will be performed:

1. Document the routes of exposure and how the exposure occurred.
2. Identify and document the source individual (unless the identification is infeasible or prohibited by state or local law).
3. Obtain consent and make arrangements to have the source individual tested as soon as possible to determine HIV, HCV, HBV infectivity. Document that the source individual's test results were conveyed to the employee's health care provider.
4. If the source individual is already known to be HIV, HCV, and/or HBV positive, new testing need not be performed.
5. Assure that the exposed employee is provided with the source individual's test results and with information about applicable disclosure laws and regulations concerning the identity and infectious status of the source individual (e.g. laws protecting confidentiality)
6. After obtaining consent, collect exposed employee's blood as soon as feasible after exposure incident, and test blood for HBV and HIV serological status.
7. If the employee does not give consent for HIV serological testing during collection of blood for baseline testing, preserve the baseline blood sample for at least 90 days. If the exposed employee elects to have the baseline sample tested during this waiting period, perform testing as soon as feasible.

ADMINISTRATION OF POST EXPOSURE- EVALUATION & FOLLOW-UP

The Exposure Control Officer (Ryan White Officer) or EMS Chief ensures that the health care professional(s), which are responsible for each employee's hepatitis B vaccination and post-exposure evaluation & follow-up, are given a copy of OSHA's bloodborne pathogen standard. The Officers ensure that the healthcare professional evaluating an employee after and exposure incident receive the following:

1. The employee's job description.
2. The route(s) of exposure.
3. The circumstances of exposure.
4. Results of the source individual's blood test (if possible)
5. Relevant employee medical records, including vaccinations.

The Exposure Control Officer or EMS Chief or the Baldwin Area Medical Center will provide the employee with a copy of the evaluating health care professional's written opinion within 15 days after completion of the evaluation.

EVALUATING THE CIRCUMSTANCES OF AN EXPOSURE INCIDENT

The Exposure Control Officer and Chief will review the circumstances of all exposure incidents to determine:

1. Engineering controls in use at the time.
2. Work practices followed.
3. A description of the device being used.
4. Protective equipment or clothing that was used at the time of the exposure incident. (Jumpsuit, uniform, gloves, face mask, etc.)
5. Location of the incident. (Ambulance, residence, hospital, etc.)
6. Procedure being performed when the incident occurred.
7. Employee's training status.

The Officers shall maintain a sharps injury log for the recording of percutaneous injuries from contaminated sharps. The information in the sharps injury log shall be recorded and maintained in such a manner as to protect the confidentiality of the injured employee. The sharps injury log shall contain, at a minimum:

1. The type and brand of device involved in the incident.
2. The area where the exposure incident occurred (inside ambulance, residence, hospital, etc.)
3. An explanation of how the incident occurred

EMPLOYEE TRAINING

All Baldwin EMS employees who have occupational exposure to bloodborne pathogens receive training conducted by the Chief or designee. Baldwin EMS may supply training to employees of outside organizations, which have exposure to bloodborne pathogens with our organization, as well.
All Baldwin EMS employees who have occupational exposure to bloodborne pathogens receive training on the epidemiology, symptoms, and transmission of bloodborne pathogen diseases including HIV, HBV and HCV. In addition, the training program covers, at a minimum the following elements:

1. A copy and explanation of the standard.
2. An explanation of this ECP and where to obtain a copy.
3. An explanation of methods to recognize tasks and other activities that may involve exposure to blood and OPIM, including what constitutes an exposure incident.
4. An explanation of the use and limitations of engineering controls work practices, and PPE including specific training on the sharps used.
5. An explanation of the types, uses, location, removal, handling, decontamination, and disposal of PPE.
6. An explanation of the basis for PPE selection.

7. Information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine will be offered free of charge.
8. Information of the appropriate actions to take and persons to contact in an emergency involving blood or OPIM.
9. An explanation of the procedures to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available.
10. Information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident.
11. Information on timely reporting of an exposure incident so that the chemical prophylaxis, if appropriate, can be administered in a timely manner in order to be effective.
12. An explanation of the signs, labels and/or color-coding required by the standard and used within this organization.
13. An opportunity for interactive questions and answers with the person conducting the training.
14. Training materials for this organization are located in the storage room and training room.

RECORDKEEPING

Training Records

Training records are completed for each employee upon completion of training. These documents will be kept for at least three years in the Baldwin Area EMS training records.

The training records include:

1. Date of training session.
2. Instructor and qualifications
3. Summary of training session
4. Signatures of employees, which attended the session.

Employee training records are provided upon request to the employee or the employee's authorized representative within 15 working days. Such requests should be addressed to the Chief.

Medical Records

Medical records are maintained for each employee with occupational exposure in accordance with 29 CFR 1910.20, "Access to Employee Exposure and Medical Records."

The Officers are responsible for maintaining the required medical records. These confidential records are kept in each employee's file in the office of the service. They are kept the duration of employment plus 30 additional years.

OSHA Recordkeeping

All work related needlestick injuries and cuts from sharp objects that are contaminated with blood or OPIM are recorded as an injury on the OSHA Injury and Illness log (300) by the Director. In addition, they will be logged on the Needlestick and Sharps Injury Log and also "Privacy Case" Log as deemed necessary.

A non-sharps exposure incident is evaluated to determine if the case meets OSHA's Recordkeeping Requirements (29 CFR 1904). The Director does this determination, as well as the recording activities.

The privacy of employees will be protected by not recording the names of individuals on the OSHA Injury and Illness log. (OSHA 300) These employees will be logged as "privacy case."
All other provisions of the OSHA record keeping rules (29 CFR 1904) will be followed.

TUBERCULOSIS POLICY

Transmission : Tuberculosis is carried through the air in an infectious droplet nuclei of 5 microns . These droplet nuclei may be generated when a person with T.B. coughs/spits, speaks, or breathes.

Universal Precautions (In addition to previously list)

1. All ambulance attendants will wear their properly fitted T.B. mask or hepa respirator mask.
2. Any bodily fluids from the mouth or nose will be disposed of in a biohazard container.
3. Whenever a patient is coughing, spitting, or being suctioned, a T.B. mask will be worn.
4. Notify the hospital of any patient exhibiting any of the above signs or symptoms.

Significant Exposure Protocol

1. Adhere to all universal precautions.
2. In a known case of T.B. apply a mask to the patient as well as to ambulance personnel.
3. As soon as patient has been delivered to their destination, air out the ambulance.
4. As soon as the exposure is realized, it should be reported to the Infection Control Officer immediately.
5. The document "Guidelines for Preventing the Transmission of Tuberculosis in the Health-Care Setting, with Special Focus on HIV-Related Issues" should be read thoroughly.
6. The OSHA 300 log will be completed for the incident.

Medical Surveillance for T.B. This will include the following:

1. Initial baseline screening at the time of employment.
2. annual skin test
3. Re-testing every six months for workers with a significant exposure.

N95 Respirator Masks

Baldwin Area EMS uses Medical Masks which are a class of disposable respirators that have been approved by the FDA and NIOSH as a Type N95 respirator suitable for use where fluid resistance is a priority. These masks are suitable for use in surgical and clinical settings have at a minimum a 95% efficiency rating against particulates which are 0.3 microns or larger and have met CDC guidelines for TB exposure. This N95 mask helps protect against particulate contaminants but they do not eliminate the risk of contracting any disease or infection. The Misuse of these N95 respirators may result in serious injury or even death.

The OSHA Standard 1910.134 (1998) requires fit testing of all respirators including those with positive pressure. The respirator fit test is done annually to check that the mask size and mask model chosen fits the face. The fit test confirms that the mask fits the wearer's face and that there is minimal air leakage between the face and the mask. Baldwin Area EMS Uses 3M fit testing kits to qualitatively test employees annually. Qualitative testing is a pass/fail that relies on the respirator wearer's indicating whether he/she can smell, taste, or sense the test agent. Testing agents can be bitrex, saccharin, Isoamyl acetate or an irritant smoke.

POLICY DEFINITIONS

Significant Exposure

1. Any puncture of the skin by a needle or other sharp object that has had any contact with a patient's blood or body fluid, or with fluids infused into the patient.
2. Blood spattered onto mucous membranes or eyes.
3. The contamination of open skin (cuts, abrasions, blisters, open dermatitis) with potentially infectious body fluids.
4. The transportation of a patient who subsequently is diagnosed with an airborne infectious disease.

Contaminated: The presence of blood or other potentially infectious materials on an item or surface.

Contaminated Laundry: Laundry that has been soiled with blood or other potentially infectious materials (wet or dry), or may contain sharps.

Contaminated Sharps: Any contaminated object that can penetrate the skin including, but not limited to needles, scalpels, broken glass, broken capillary tubing and exposed wires.

Exposure incident: A specific eye, mouth other mucous membrane, non-intact skin, or parental contact with blood or other potentially infectious materials.

Regulated waste: Liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dry blood or other potentially infectious materials and are capable of releasing these materials during handling; and contaminated sharps.

Cleaning: The physical removal of soil from an object, often using a detergent or mild disinfectant. (Disinfectants are less effective if organic matter, such as blood or feces is present. This needs to be cleaned up thoroughly with soap and water first.)

Potential Exposure: When contact can reasonably be expected to be made with potentially infectious body fluids, any unfixed tissue or organ, or a patient with an airborne infectious disease.

High Level Disinfectant: Has a sporicidal capability that is used for a much shorter time than that required for sterilization. It also kills the same organisms as the intermediate disinfection.

Intermediate Level Disinfectant: Kills vegetative bacteria, lipid viruses, fungi and T.B. A cleaning agent such as a commercial anti-microbial disinfectant is appropriate.

Low Level Disinfection: Kills vegetative bacteria and lipid viruses. A cleaning agent such as 1:10 solution of bleach/water is appropriate.

END

Back to Index ↑

Hazardous Materials Policy

When coming upon a scene that may involve a hazardous material release, you will want to stay up hill and up wind, at least a couple of hundred yards away until you can determine that the scene is safe. Follow the steps below:

1. Immediately contact the appropriate dispatch center via radio or phone to notify them that a hazardous materials incident has occurred.
2. Never drive through or near the released product.
3. Provide as much information about the scene as possible to dispatch: location, type of spill and product if you are able. All trucks are stocked with the ERG handbook for reference. Be aware of people trying to leave the scene that may be contaminated. Don't let yourself get contaminated.
4. Stand by your radio or phone for further instructions or questions about the scene.

Stay on the scene until help arrives. Provide as much information and assistance as possible to the arriving emergency services.

Do not try to enter the scene, contain the release or rescue victims until the scene is identified as being safe to do so. Your health and safety takes precedence over the victim's.

Follow the directions of your Duty Officer/Chief or the highest-ranking emergency official on the scene

Baldwin Area EMS provides bi-annual HazMat Awareness training for EMT's through St. Croix County Emergency Management.
END

Back to Index ↑

Legal Crew & Use of RN's on Ambulance

Baldwin Area EMS schedules two crews, a 911 crew and a transfer crew. We schedule at least two medics, one for each truck. For information on responding to a call, please reference the response algorithm. There will always be a Duty Officer on the schedule, contact them if you have any questions.

The Duty officer carries a cell phone at all times. The Duty Officer will stay in the response area at all times assuring a 911 Paramedic crew in our PSA at all times, unless they are on a call.

USE OF REGISTERED NURSES ON AMBULANCE
The purpose of this guideline is to define the criteria for using RN's on the ambulance. A RN may operate under their license and take the place of an EMT or Paramedic if appropriately trained and documentation is maintained per this guideline.

RN CRITERA PER LICENSE LEVEL:

EMT-Basic
Documentation of successful completion of an EMT-Basic course. The RN does not have to be currently licensed as an EMT or hold current national registry credentials.

1. Current WI Registered Nurse license. A copy will be maintained in the personnel file.
2. Current CPR certification.
3. Letter from service Medical Director in RN's personnel file allowing RN to operate under the RN license as an EMT-Basic for Baldwin Area EMS Ambulance.
4. Maintain annual skill competencies per our department guidelines.
5. Encouraged to attend departmental CME training sessions.

Advanced EMT
Same as EMT-Basic #1 through #4 except Medical Director letter must state RN can operate to Intermediate Tech level.

1. Maintain annual skill competencies per department guidelines.
2. Encouraged to attend departmental CME training sessions.

Paramedic
Same as EMT-Basic #1 through #4 except Medical Director letter must state RN can operate to Paramedic level.

1. Current ACLS certification. PALS/PEPP certification encouraged, but optional.

2. Provide documentation of training in intubation, RSI, needle chest compression, adult IO, needle cricothyrotomy and pericardiocentesis. RN may obtain this training in an airway lab through CVTC, Regions, HCMC, U of M, UMBC or other medical director approved sites.
3. Maintain annual skill competencies per our department guidelines.
4. Encouraged to attend departmental CME training sessions.
5. Note: CCTP course or CEN certification allows an RN to function at CCTP Paramedic level.

SPECIAL NOTES:
The Medical Director has authority to move an RN from one level to another based on skill proficiencies at any time. A letter will be maintained in the personnel file for the current level the RN may operate at.
END

Back to Index ↑

Controlled Substance Policy

This policy is to ensure the safe storage, administration, restocking and documentation of use of controlled substances within Baldwin Area EMS.

POLICY/PROCEDURE:

A. Controlled substances must only be handled by licensed ALS personnel trained in the use of controlled substances. Non-ALS personnel are prohibited from handling controlled substances.
B. The shipping list will be given to EMS chief to match against future invoices.
C. Paramedics will be assigned an ID card with proximity chip which is password protected. That card will control access from the medication dispenser. Each Medic will be allowed to dispense medications to an ambulance within their scope of practice. The dispenser will record which Medic accessed a medication and track which ambulance it was placed in. If a medication is selected by mistake, it must be reported to the assistant chief so stock level can be accounted for.
D. All controlled substances are kept inside each ambulance and response vehicle in bag sealed with a numbered tamper-proof tag.
E. Anytime the control seal is broken on the controlled substance bag, the old tag number, new tag number and the reason for opening the container shall be documented in Controlled Substance Log.
F. Each 24 hour period a Paramedic will check each vehicle and verify the controlled substance tags are secure and the tag number matches the Controlled Substance Log. After assuring the tag is intact and the number corresponds with the log, the Paramedic must sign the Controlled Substance Log and write "*Shift QA"* under the run number column and may do so without opening the numbered tamper-proof tag.
G. If the tag is not intact or the number is not verifiable, a complete inventory of that bag will be taken immediately. A new numbered tamper-proof tag shall be placed on the bag, the Paramedic must sign the Controlled Substance Log and write "*inventory"* under the run number column. Any deviation in this quantity shall be fully documented and reported to the EMS Chief immediately.
H. If inventory is moved from one vehicle to another, a complete inventory must be taken and logged.
I. Every time a container is inventoried the expiration dates must also be checked. Any expired medication must be wasted and recorded in the log with a signature of the person witnessing the waste of medication.
J. Each usage of a controlled substance must be properly documented in the electronic patient care report including the following information:
    1. Date of administration
    2. Time of administration
    3. Old tag number
    4. New tag number
    5. Patient name

6. Drug and dose given
7. Drug amount wasted
8. Paramedic/Intermediate signature
9. Witness signature (any staff member or hospital staff)

K. Any controlled substance that has not been fully administered to a patient must be properly wasted. The amount wasted must be noted on the log and witnessed by EMS or hospital staff.
   a. Wasting the substance, must be accomplished by dispelling the substance in a sink or down the drain in front of the witness. If no sink or drain is present, spraying it on the ground or in a large garbage can is acceptable.

L. Once Controlled Substance Log page is filled it shall be placed in an office file cabinet. The original log will be kept on file in the agency for medical director review for two years.

M. Monthly controlled substances shall be audited by the chief and assistant chief together. An inventory will be printed by the medication dispensing unit and verified against the Controlled Substance Log and usage logs printed from the patient care report system

END

Back to Index ↑

Continuous Quality Improvement (CQI)

Purpose:
To review patient care reports to identify and continually measure the quality of emergency medical care being provided. Goal of the QA program is to assure the quality, safe and effective delivery of pre-hospital care. Each provider is guided by the QA program in order to ensure that the following goals are met:

1. Appropriate care of patients and competence of staff.
2. Identification of pre-hospital needs.
3. Minimizing patient risk.
4. Responsiveness to perceive care needs and compliance with all patient care guidelines.
5. Continuous evaluation and improvement of patient care and use of up-to-date technology

Actions:
In attempt to prevent quality of care issues Baldwin Area EMS will keep all personnel up to date on our service's policies and guidelines by reviewing any changes in existing policies and guidelines periodically during training. All personnel are individually responsible for knowing and following our service's policies and guidelines.

Internal process:
Baldwin Area EMS wants to keep an open atmosphere where everyone feels comfortable asking questions and free to learn to their highest potential. All runs will be reviewed. If the Chief feels a run needs to be audited, the run will be audited. Criteria to warrant an audit: skill that is solemnly used (even if done correctly), wrong med dosage or wrong med used, and anything else that may have placed a patient or danger, or could place a patient in danger if it continues.

Medical Director Process:
The Medical Director shall review all PCR's regarding intubation, cardiac/respiratory arrest, possible medication errors, severe trauma or burns, any pediatric cases of serious nature. The Medical Director may then ask for a meeting with the EMS Chief and ER Nurse Manager from Baldwin Area Medical Center. The run(s) will be reviewed using the audit form in our manual. Discrepancies will be highlighted and documented. Personnel will then meet with the EMS Chief, unless the Medical Director wishes to meet the staff member directly.

Remediation, Policy changes:

Final decisions about policy changes and personnel remediation rest with the EMS Chief and Medical Director.

Review of PCR's at training sessions:
Some reviewed reports may be presented at training sessions in which crew member names will be removed, the purpose for review will always be for improvement of all service members and patient care issues in an open learning environment.

Confidentiality Notice:
The functions of the Continuous Quality Improvement Committee include the evaluation and improvement of the quality of medical care provided in the emergency medical system. Accordingly, the proceedings, records, and files of the EMS CQI Committee are confidential by law and further are neither discoverable nor admissible in any proceeding arising from the matters that are being reviewed and evaluated

END

Back to Index ↑

Patient Care Report Charting

PURPOSE:
To establish minimum documentation requirements so that each run report accurately reflects a patient's assessment, history, and the emergency medical care given to that patient. While using the electronic report EMT's must assure accuracy in the written narrative.

GUIDELINE:
The automated PCR on computer tablets shall be completed with all tabs and fields verified by the EMT/PARAMEDIC. All fields must have an answer. *Reports shall be completed immediately following the run.*

SPECIAL NOTES: .

1. The electronic PCR shall be completed immediately following the run. In certain situations, the Duty Officer may allow an EMT to complete the report at a later time, but within 24 hours of the run.
2. A run report must be filled out each time an EMS provider offers or provides service to a patient.
3. There should be one run report for each patient. In OB cases, the mother and newborn must each have separate run reports.
4. In severe trauma, where scene times are delayed longer than 10 minutes, document reasons for extended scene times, i.e. extrication or unsecured scene.
5. Medical control authorization or a physician name is required on all runs where the patient is not transported.
6. Any suspicious situation regarding child neglect/abuse must be reported according to Wisconsin State Law. Medical control can assist you with this process.

Reasons for Documentation

1. Continuation of care, supplying vital information to the ER staff
2. Treatments administered and improvements or deterioration with treatment
3. Description of the scene i.e. Damage to an accident victim's car
4. Legal record of the case
5. Record of procedures performed under auspices of licensed physician
6. Demonstrates protocols are being adhered to and compliance with the standard of care

PCR's
Guide system improvements, Training programs and Training tools, Revenue collection, Research, Billing and administrative data, Operational statistics, a Permanent Record – most lawsuits against EMT's relate to improper care documentation. PCR may be used in a criminal trial.

Rules for Documenting:

1. If it wasn't documented, you didn't do it, and if you didn't do it, don't document it.

2. Be accurate and complete, precise and comprehensive. Be consistent.
3. Be objective, don't assume anything. Be specific, don't generalize
4. Promptly record information – the longer you wait, the more you will miss.
5. Be professional – the report will be scrutinized by all sorts of people. Don't use jargon, slang, libel/slander, irrelevant opinions, or abbreviations.

The narrative portion of the report must describe the following:

1. Pertinent events affecting patient's chief complaint before EMS arrival.
2. Patient's chief complaint.
3. Patient condition on EMS arrival.
4. Results of SAMPLE history not addressed elsewhere in the report.
5. Results of OPQRST or DCAP/BTLS not addressed elsewhere in the report.
6. EMS interventions during patient contact and the patient response to EMS interventions.
7. Changes in patient condition which do not result from EMS interventions (if any).
8. Observations from physical examination.

END

Back to Index ↑

Charge Sheet Policy

TRANSPORT BOX:

You should check ALS care or BLS care, and either Resident or Non-Resident.

- "ALS care" means a Paramedic provided assessment and /or care, ALS skills preformed
- "BLS care" means ALS/BLS personnel were on board and provided BLS care only, because that is all the patient needed
- "Resident" means they reside and pay taxes within our primary service area "PSA".
- "Non-resident" means they do not reside at a residence within our PSA.

MILEAGE: Mileage from pickup to hospital. (*When the patient is on board only*. *Mark to the tenth of a mile).*

NON-TRANSPORT BOX:

- "ALS Evaluation/Care" by a Paramedic on scene, medical interventions preformed, then released.
- "BLS Evaluation/Care", vital signs, head to toe assessment and/or simple wound treatment, then released.
- "Lift assist only" means no medical interventions or treatment provided, patient signed off after vital signs.
- "Refused" all care/all treatments offered. AMA/patient refusal only. No charge.

STANDBY BOX: Stand by events are not billed by LifeQuest, but are entered in the ImageTrend software; the charge sheet must be scanned in, with the appropriate box checked. United Fire/Rescue, Other Fire Service (who), sports standby, and other (June Bug Days event).

Center section: Please document "PATIENT NAME:", "REASON DISPATCHED:", "Medically Necessary Transport Reason:", the ER Doctor seeing patient (also on face sheet), Receiving hospital, Date of Service (started on), Zip code the person was picked up in (required for Medicare patients, do for all)

The saline lock, flush and IV fluid are not part of the IV start kit. Mark each separately as used.

MARK ONLY THOSE ITEMS YOU USED AND CAN NOT RETURN TO STOCK.

END

Multi-Casualty Incident/MCI Plan

PURPOSE
Definition of a Mass Casualty Incident: An incident with multiple casualties that overwhelms the resources of the Baldwin Area EMS. An MCI cannot be defined by a set number of casualties. Due to variations in actual and potential resources (e.g., ambulances, EMT staffing, supplies, etc.) and the nature of an incident (e.g., natural disaster, haz-mat, MVC, etc.), the number of casualties will vary.

MCI training will take place bi-annually. Baldwin Area EMS maintains a full stocked disaster trailer able to respond to a 50 person casualty situation.

Baldwin Area EMS has adopted the full plan from the State of Wisconsin EMS Advisory Board EMS Special Operations Committee dated 10/2010. The entire plan can be found in the forms section at the end of this manual.

END

Back to Index ↑

Response and Scene Guidelines

Uniform, Dress Code and Personal Appearance

A. Any member that is on duty (on the schedule) must follow the dress code. Failure to follow the dress code could result in discipline or potential termination. On duty includes call time, public events, sporting events, and any other time the staff member is representing the service.

B. The proper uniform will consist of Baldwin Area EMS approved, or issued clothing.

a. EMS Pants must be worn, either blue or black in color, cannot be made of denim.
b. EMS shirt with ID badge must be worn, approved shirts are: the blue formal shirt, blue polo shirt, gray polo shirt, jumpsuit, pull over, vest, and station t-shirt when appropriate.
    i. Station t-shirt can be worn at that the station, at approved public events by the chief, and on calls when the day time sustained high is above 90 degrees.
c. For foot wear please refer to the foot wear policy.
d. Body armor is available in both QRV vehicles if there is a need for them. If a crew member wants to purchase their own body armor for day to day calls, they can do so at their own expense, and it must be worn under the Baldwin Area EMS shirt, and cannot be visible.
e. Baseball caps and stocking caps can be worn, and are a personal choice. They must be blue or black in color, cant represent another service, and generic EMS hats are fine.
f. Jackets are to be worn when the person feels they need to be worn. If the crew member does not have a jacket they can use the jackets located in the lounge.
    i. Approved jackets include: Baldwin issued soft shell jackets, high visibility jacket, and turn out jacket located in the apparatus bay.
        1. If the crew is working an incident on a roadway or a fire scene they must wear the high visibility jacket or vest.
    ii. Generic jackets that are black or dark blue in color with EMS identified on the jacket and with reflective lettering on the back can be worn as long as no other service is identified.
g. Jewelry can be worn while on duty, but remember that this job entails physical movement in sometimes hazardous or confined areas. Jewelry, watches, or any other garment that could be snagged or tangled on something, grabbed by a

patient, or cause a distraction is strongly discouraged. If the Duty Officer feels any jewelry provides a safety risk, the crew member will have to remove it.

h. Cologne, perfume, or any other scented lotions or sprays can be used, but must be used in moderation. Patients could have allergies to these items, and make treatment more difficult. If the Duty Officer feels that these items have been applied in excess, the crew member will have to remove it.
i. It is up to the member to maintain and clean their uniforms. If an item is damaged it is the members responsibility to bring it to the attention of the Duty Officer to get it fixed or to get a new item. If a new item cannot be obtained at that time, an exception can be made till a new item can be provided.
j. Dirty or wrecked clothing will not be tolerated, the member will be asked to change his or her uniform. If they have nothing to change into, they could be sent home, to change, and will not be paid for the time they missed.
    i. Wrecked or dirty clothing is defined as deformity to the item that was not there when it was originally purchased.

C. Baldwin EMS clothing is not to be worn while buying or consuming alcohol. Upon termination all clothing purchased by Baldwin EMS will have to be turned over to Baldwin EMS. Remember, while wearing Baldwin EMS clothing you represents the service, and if there is behavior that is unbecoming of an EMS employee while wearing Baldwin EMS clothing, disciplinary actions could be taken.

D. If you are unable to wear any part of the uniform due to medical reasons, a note must be provided from a doctor.

E. If member first responds to a scene, they do not need be in Baldwin EMS clothing, but it is strongly encouraged.

F. Equipment hand out:

a. On the first day, a member will receive a blue dress shirt with a badge, and a polo shirt.
b. After the member is off of probation, generally after six months, they will have the ability to choose between a pull over, soft shell jacket, or high visibility jacket, in which the service will provide.
c. After one year, or at the start of each calendar the member will have the ability to choose between a t-shirt, polo shirt, pull over, light weight vest, soft shell jacket, or high visibility jacket for the service to purchase.
    i. If the member already has an item, and wants another of the same type, for example wants a second high visibility jacket, it is up to the chief's discretion to purchase the second jacket.
d. Staff is not allowed to purchase any equipment with Baldwin EMS Logo or name on it without written consent from the Chief.

G. Clothing specific information

a. Blue Dress Shirt:
    i. ID will be worn on the right lapel, rank insignia will be worn centered on each collar, badge will be worn on the left side on the reinforced badge area, Baldwin EMS patch will be worn on each shoulder with the top one inch below the seam, and a white or blue shirt will be worn under the dress shirt.
b. Polo Shirt:
    i. Baldwin EMS patch on the left chest and Id will be worn on the right side mic space.

c. T-shirt:
    i. Id badge should be worn on the shirt if possible, placing the badge on the belt should be a last resort, if worn on the belt, and the badge should be off set to the right side.
d. Jumpsuit:

Black or dark blue in color, ems patches on both shoulders one inch below the shoulder seam, and the zipper will remained zipped up.

Footwear Policy

1. Work boots black in color or closed toed shoes, , with slip resistance design shall be worn at all Baldwin Area EMS Scenes or events. Safety toe and mid sole shank are strongly encouraged on all EMS duty footwear. All footwear must be laced and secured to feet while performing any duty for Baldwin Area EMS; this includes driving apparatus. If this policy is not met, personnel will be asked to leave the operating area and return with the proper footwear. The person in violation of this policy will not be paid for any time they missed.

2. Exceptions:
    a. You come across an accident scene and render aid on your own time, whether trauma or medical.

Comfortable footwear can be worn by EMS staff while in station or at home, so long as they are not in violation of statement number one. The footwear must be easily removable as it should not slow down response time while changing footwear into appropriate footwear for operations

HIPAA and Patient Privacy and Security of Patient information

Purpose: To remain in compliance with all state and federal laws designed to protect the privacy, confidentiality, and security of patient information.

Policy: All personnel shall maintain the confidentiality of patient and other confidential information in accordance with applicable legal and ethical standards of Baldwin Area EMS Patient Privacy Policies.

Privacy/HIPPA: Information pertaining to a patient's medical situation may only be shared with other health care professionals that are directly involved in the patient's treatment. Information may also be shared for other limited purposes such as, payment activities, health care operations, and other purposes specifically permitted by law. If you are asked to provide information and are not sure if the person requesting the information falls into one of the categories listed above, contact the chief or the

duty officer before you release the information, or have the person requesting the information contact the chief or the duty officer.

Security: Patient information is collected and stored on computers and in file boxes. Patient information stored on computers is transmitted electronically to the billing company. In order to maintain the security and protect the patients HIPPA information, personnel must follow all applicable computer use and data policies:

- Staff must log off the computer after they have completed their run report.
- Computers must be stored in the trucks when not in use, or inside the building, which is secured.
- All run reports when finished will placed in the lock drawer.

Any questions regarding these policies should be directed to the Chief or the Privacy Officer.

Any staff member found to violate any of the pre-mentioned items either intentionally or unintentionally, will face disciplinary actions by the Chief after an investigation has been completed. Punishment could include removal from the service. If you are aware of any staff member that is violating the HIPPA policy, it is your duty to bring it the attention of the Chief or the Duty Officer. Failure to bring this information forward could result in disciplinary actions for withholding the information.

Media Request: If a media source requests any information on a patient or a call, you should not provide them any information, and provide them with the phone number of the Chief or the Duty Officer.

Facebook and Social Media Policy

Purpose: To provide an explanation of what is allowed to be on social media, and what is not allowed from a service standpoint.

Policy: The following will explain what can and cannot be posted on social media.

- All Baldwin Area EMS personnel will refrain from posting any information or photos about any calls that the service has had, or making vague comments with the intent to start a conversation about the work day. An example of this would be, “wow, today was a busy day”, or “everyone drive slow the roads are bad and I have already been on several calls”.
- Baldwin Area EMS staff will refrain from making comments on someone else’s post, that may be talking about a call the service has been on with the intent to start a conversation about the call.
- Any posts by a staff member that makes any negative comments about the service, about another service, or about any staff member on the service is prohibited.
- All Baldwin Area EMS staff will refrain from posting any pictures of themselves while wearing Baldwin EMS gear while drinking or conducting themselves in an unprofessional

manner. It is also prohibited to post photos of Baldwin Area EMS gear in a negative or unprofessional manner. Staff also cannot allow someone else to post any negative pictures of Baldwin Area EMS gear on a second party's social media site. By allowing someone else to post pictures of EMS gear in a negative manner, the Baldwin staff member may receive disciplinary action.

Any violations of this policy can result in disciplinary action by the service pending an investigation. Disciplinary action may range from a verbal warning to removal from the service.

Baldwin EMS Response Guideline

Objective: To ensure an appropriate and timely response with the correct apparatus and personnel to all request for Emergency Medical Services within the Baldwin Area EMS District.

Quality Assurance: This Response guideline will serve to ensure the correct response, while utilizing a standardized approach based upon scientific data for reducing the liability to the EMS Department, Village of Baldwin, and operator of the apparatus. Any deviation from this guideline must be documented, with a clear description as to the reason, in the appropriate Patient Care Report (PCR). The EMS Supervisor(s) responsible for quality assurance within the department will monitor for any concerns or trends that may indicate a potential liability or safety concern to the department or any staff members.

Emergency Medical Dispatching: The St Croix County Dispatch Center will dispatch most requests for an EMS Response within this district based upon the recommendations provided by the National Academy of Emergency Medical Dispatch; this has 5 standard response codes. In the future, St Croix County Dispatch may integrate at their, and the medical directors discretion, a 6th response code. This policy will address the current 5, and be adjusted as needed should the 6th (Omega Response) become active.

****On call crew member will be ready to perform their tasks at the start of their shift. A crew member shall refrain consuming any alcohol or taking any other medications that may affect his/her performance while on duty up to 8 hours before the start of their shift.***

Responding to the Station:

1. From the time Baldwin EMS is notified of a call, via a page from dispatch, the on call crew has seven minutes to go enroute. If a crewmember is not at the hall in time for the truck to go enroute, and a legal crew can be comprised, the ambulance can go enroute without the missing crewmember, only after the seven minutes are up.
2. For POC staff, they will start to receive run pay when they are first notified from dispatch about the call.
3. If the call is canceled before the unit can go enroute, a run report must be completed to ensure staff is paid for that call.

Alpha-Delta Responses:

1. When dispatch has determined the call as an Alpha level medical, the duty officer, and responding ambulance will respond to the call without the use of lights and sirens (non emergent).
2. When dispatch has determined the call as a Bravo level medical, the duty officer will respond with the use of emergency lights and sirens (emergent) and the dispatched ambulance will respond without the use of emergency lights and sirens (non emergent). At the earliest possible time, when the duty officer has determined the nature and severity of the patient(s), they will promptly communicate with the ambulance if they need to increase the response to the use of emergency lights and sirens.

3. When dispatch has determined the call as a Charlie level medical, the duty officer and the ambulance will both respond with the use of Emergency Lights and Sirens (emergent). At the earliest possible time, when the duty officer has determined the nature and severity of the patient(s), they will promptly communicate with the ambulance if they need to decrease the response to no longer using the emergency lights and sirens.
4. When dispatch has determined the call as a Delta level medical, the duty officer and responding ambulance will both use emergency lights and sirens (emergent).

Echo level Responses:

These calls have been identified by the National Academy of Dispatch as requiring immediate interventions by any trained responder and the use of an AED. When Baldwin Area EMS receives an Echo level medical, the duty officer and ambulance will both respond emergent, whenever possible, a 2nd Quick Response vehicle will also respond emergent, and efforts to ensure a minimum of two paramedics will be made by the duty officer. Any available EMS personal in a reasonable distance to the scene would also be authorized to first respond to the scene given the nature of the call. You may also request a Rescue Squad from the

fire department to assist in patient moving and CPR if the Lucas does not fit the patient.

Responding without a dispatch response indicator:

Nearly every call dispatched by St. Croix County will include a dispatch response code. This is typically available on the first or second page. On rare occasions this response level will be provided to the unit when they indicate they are responding on the radio. Should a response code not be available (ie: Law Enforcement requests for EMS) the responding units will follow the Bravo Response procedure.

1 The Duty Officer shall always be the staff member that contacts dispatch or the hospital when paged to do so. Other members will be notified of the situation if so warranted by the Duty Officer.

2 If paged: "Respond to your station and call dispatch"
Such calls are generally involve suicide attempts or bomb incidents in which dispatch is *being discrete. You are to respond to the station immediately, but without use of emergency lights or sirens (Avoid any streets/areas that appear to have police activity). The Duty Officer will contact dispatch for*

Instructions and advise the crew at the station.

3 EMT's on call shall respond to the ambulance station operating with due regard. If poor driving conditions, road construction, and unusual circumstances may delay your response time, you will need to stay at the station. You must obey all posted traffic signs and laws while responding to station.

4 All members must wear an appropriate uniform when responding to a call per OSHA 29. See uniform policy. While operating on highways, all EMT's must wear a hi-visibility vest/jacket as required under federal DOT laws.

5 Once the ambulance has been paged, the crew is obligated to respond to the scene unless informed by law enforcement or Baldwin Area EMS personnel that no patient can be found or they left the scene by other means. Once cancelled by proper personnel, the responding crew shall complete a detailed PCR stating the circumstances of the call. If the calling party cancels the ambulance; slow the response, but continue and obtain a patient refusal as part of the documentation.

6 Occasionally an ambulance will be canceled before arriving on scene by law enforcement, the Duty Officer shall make the decision to respond or cancel. Cancellations shall be documented with reasons why.

7 Once on call, an EMT needs to be able to respond to every call for the assigned crew. If an EMT fails to respond to a call appropriate action will be taken by the chief in the following manner, first offense the chief will talk to the staff member, second offense will be turning the pager in for two weeks, third offense will be removal from the service. The chief has the ability to remove any staff from the service if their action warrants

immediate removal.

8 If a scheduled EMT is unable to take call, an equivalent or higher license level substitute shall be found in a timely manner. The member requesting the change must ensure the computer system and the posted schedule at the station is updated. The member requesting the change should also notify the other EMT's on call and Duty Officer. The scheduled EMT is not relieved of his/her duty until a substitute can be found and appropriate changes made.

9 The drive will locate the correct address in the map book before the ambulance leaves the station.

10 Dispatch must be informed by radio when:

a. En route to scene
b. Arriving at scene
c. Leaving scene
d. Arriving at destination
e. Returning to the station
f. Back in service

11 Baldwin Area Medical Center (Primary Medical Control) must be notified by radio when:

a. Transporting a patient to BAMC.
b. BAMC must also be notified as soon as possible if there are multiple patients or if any patient is in critical condition or if a helicopter is enroute to their helipad.
c. Patient information must be communicated to BAMC by radio or telephone.
d. Using the radio should be kept to a minimum during critical incidents, those involving multiple agencies, or when multiple agencies are on different calls. Discretion in radio use must be used in certain situations such as bomb threats, minors, and psych patients. Consider using the phone instead.

12 If the scene of the call is in the immediate proximity to the responding EMT's location at the time of the call or if the scene impedes the response of that EMT to the ambulance station, he/she may go directly to the scene only after taking proper infectious control precautions and contacting the responding ambulance by radio or through Dispatch. Any member going straight to a scene must be clearly identified as EMS personnel and wearing appropriate uniform.

13 When one ambulance will be responding to a call, it will not leave the station in less than seven minutes unless *all* on call EMT's are present or contact has been made. After seven minutes, from the time of notification from dispatch, a third page can be requested, only if an adequate crew can't be located.

14 If a third page is requested, the ambulance should wait three more minutes, if no contact has been made with any other member of the crew, a request for the backup crew to be paged or an all call page. If we are still unable to get staffing, a request for the nearest ALS service to the patient

should be made by contacting dispatch (the request must specify to dispatch which ALS service to send).

15 Law enforcement officers and/or Dispatch occasionally request an "ambulance only" at a vehicle crash. It is the responsibility of the Duty officer to ensure that Fire & Rescue has been dispatched from the closest station to any crash on the interstate or busy highway for a "fend off' vehicle. If you notice any leaking fuel, or feel the situation warrants a fire & rescue response once you are on scene, ask dispatch to page the closest station for assistance.

16 Responding to any type of a motor vehicle incident, both crews will respond until law enforcement on scene, or ems on scene state there is only one patient. The first truck to get a crew should leave first, by this we mean, if the transfer truck has a crew and is ready to respond, they can respond before the 911 truck leaves the station. Also if one member from the transfer crew is at the station, and one member of the 911 crew is at the station, they can both jump into the same truck and respond together, the other crew members will respond in the second out truck. If only one truck is needed, the second truck will stage at the station for coverage, and will have to write a canceled run report in order to guarantee payment for the call.

17 If the primary crew has not cleared back in service and a backup crew is paged (provided a backup crew is scheduled) it is preferred the backup crew take the call, the primary crew should not cancel backup crews once paged.

18 Ambulances are not designed for off road use. A driver shall not attempt to drive through a ditch, field, or grass area that is not designed for ambulance traffic. Damage to an EMS vehicle shall be reported immediately to the Duty Officer.

19 Turn around (Cross through the median) on interstate are used only for life threat emergencies. They shall not be used in non-emergent modes of transport. Use over passes (bridges) regardless of the mileage unless a life threat exists.

20 Do not travel against the flow of traffic (wrong direction) on a one way street or on the interstate.

21 Use of lights and sirens from the scene to a hospital, or use during inter-facility transports shall be documented with the medical necessity for the use of L&S.

22 EMS is not to cancel fire department. The first arriving unit shall call dispatch with any findings (One car on its side in the ditch, no fire, leaking fluids, or extrication needed OR single story home smoke showing family evacuated). Fire department will decide to slow response or what response is needed.

Back to Index ↑

Placing Ambulance back in service

When arriving at the hospital, if your truck is clean and ready to go on another run, report to dispatch you are at the hospital, and available for calls. If the truck is dirty and needs cleaning and restocking at the station, call out at the hospital, not available for calls.

Once you have completed a call, ***the entire crew shall prepare the ambulance for another call.***

Each cabinet or bin is labeled with specific quantities of supplies. Restock the container with appropriate number of supplies to return it to par level only, no less, no more.

Replace any missing supplies regardless who used them. Inspect outside cabinets for missing supplies or equipment and replace as needed.

All garbage in the trucks will be removed, and garbage cans in the trucks will be emptied. All surfaces of the truck in the patient compartment will be wiped down. This is part of getting the truck ready for the next call.

If any supplies are out of stock and you are unable to replace what is needed, or you find broken equipment, or damage any vehicle or piece of equipment, notify the on call "Duty Officer" immediately.

END

Back to Index ↑

Disabled Ambulance Procedure

Procedure for Emergency Road Triangles:
Any time a licensed Baldwin EMS Department vehicle is disabled on the roadway the three road triangles must be used as follows:

On a straight highway: ***(usually 2 lanes)***

a. 1 triangle 100 feet (40 paces) in front of the disabled vehicle
b. 1 triangle immediately behind the disabled vehicle
c. 1 triangle 100 feet (40 paces) behind the disabled vehicle

On a divided highway: ***(usually 4 lanes or a freeway)***

a. 1 triangle immediately behind the disabled vehicle
b. 1 triangle 100 feet (40 paces) behind the disabled vehicle
c. 1 triangle 200 feet (80 paces) behind the disabled vehicle

Procedure when Patients are on Board
If a mechanical failure during the transport of a patient renders an ambulance unable to proceed in a safe and timely manner, the driver shall:

a. Have Dispatch page for another ambulance to respond to the location of the failure for purposes of completing the transport. The transport crew must specify to Dispatch the name of the ambulance department that is to be notified.
b. If a different Baldwin EMS Department ambulance responds, the transport crew shall go with the patient to the hospital.
c. If a mutual aid service coming, our EMT in charge of patient care shall accompany the patient to the hospital for smooth transition of patient care.
d. The driver of the failed ambulance shall contact Dispatch and request a "non-preference wrecker."
e. Contact the Duty Officer for directions on towing.
f. An incident report shall be completed and submitted to the Duty Officer after returning to the station.

If a mechanical failure occurs during a transport, but does not interfere with its safe completion, the failure should be assessed after completion of the call and a determination should be made regarding the return of the vehicle to service. Be sure you are not going to cause more damage to the ambulance. If in doubt, call for another ambulance.

In the event an ambulance is involved in a collision while transporting a patient, the ambulance may not proceed to the hospital. At such time, a crewmember shall notify Dispatch of the incident and its location, as well as any injuries caused because of the incident so that additional help may be dispatched.

a. EMS personnel are to administer emergency care to all persons in need, but one EMT must remain with the initial patient at all times.
b. The Lead EMT giving care should ride with the new transport ambulance to the hospital for smooth transfer of patient care and information.
c. A driver of a Baldwin EMS vehicle in a crash shall stay on scene to complete police reports.
d. An incident report shall be completed after returning to the station and the Chief or Duty Officer notified immediately.
e. The driver will submit to a drug test within four hours of any crash.

Procedure with no Patients on Board
If a mechanical failure disables the responding ambulance during an emergency response, the driver shall:

a. Have Dispatch page for another ambulance to respond to the call. If returning from a call, contact the duty officer and notify dispatch you are out of service.
b. Contact Duty Officer for instructions on where to disabled ambulance shall be towed.
c. An incident report shall be completed and submitted to the Duty Officer after returning to the station.

Procedure for Fire, Theft or Vandalism:

a. Any incident of fire or theft of any EMS vehicle, the crew shall contact the appropriate police department to file a report.
b. An incident report shall be completed and submitted to the Duty Officer after returning to the station.
c. If any crewmember should discover any type of vandalism to any EMS vehicle, the incident shall be reported to Dispatch and a police officer dispatched to the location to file a police report.
d. An incident report shall be completed and submitted to the Chief or Duty Officer after returning to the station.

Procedure for Damage to Property:
In all cases of motor vehicle collision in which any EMS vehicle or any property is damaged, the crew must call the appropriate police department to file a police report. The Duty Officer shall respond to the scene as appropriate and an incident report shall be completed and submitted to the Chief.

END

Back to Index ↑

Lights and Siren

Purpose:
The purpose of this policy is to establish a policy for the prudent use of lights and sirens (L&S) when responding to a call or transporting a patient and to improve and enhance safety for the patient, the EMS crew, and the community.

Policy:
The use of L&S should be limited to situations in which there is good reason to believe that a potentially unstable patient will benefit from any potential time savings that may be realized from the use of L&S and that the safety of the patient, crew and general public will not be put at undue risk because of the use of L&S.

Identify patients for whom safe use of L&S during response and/or transport can potentially reduce patient morbidity or mortality sufficiently to balance the risk of such response/transport.

Every L&S transport shall clearly document the patient's condition, the case circumstances, and the rationale for choosing lights and siren transport in patient narrative.
END

Back to Index ↑

Run Cancellation

Purpose:
The purpose of this policy is to establish a standardized procedure when EMS activation has been cancelled while en route to a scene.

Policy:
Upon notification of the cancellation from the communication center or law enforcement on scene, consider cancellation to be advisory. Downgrade emergent response and respond without the use of lights and siren to the scene to make evaluation.

If no patient is found by law enforcement or the Medic vehicle on scene, unit may cancel and return to station.

If the Duty Officer is on scene and requests you cancel, the ambulance shall cancel and complete a cancelled run report.
END

Back to Index ↑

Medic Quick Response Vehicle

The ALS Quick Response Vehicle is designed to provide quicker response of advanced life support personnel to the scene of a medical or traumatic emergency, and intercepts.
DAILY ASSIGNMENT

1. The Duty Officer assigned on the primary schedule will be designated for the vehicle. Must be Paramedic level, generally a supervisory position. Twelve-hour shifts will be preferred.
2. The assigned person responding in the vehicle shall be in full uniform.

3. During shift change, the vehicle must be at the station a minimum of 15 minutes prior to shift change. Exceptions are being on a call or prior mutually agreed upon arrangements between the personnel.
4. Fuel levels should not be below ¾ at shift change, or ½ tank at any time.
5. The vehicle will be kept at our Baldwin station, except that the on-call person to whom it is assigned may operate it from home if that person lives within primary response area and it is protected from the weather as approved by the chief.

DAILY USE AND CARE

1. Once the ambulance has been paged, the ALS quick response vehicle shall be in route within 90 seconds between 0600 and 2200 hrs. and 120 seconds between 2200 and 0600 hrs.
2. Seatbelts must be worn by all occupants when vehicle is in motion.
3. Drivers must follow response guidelines. Tobacco use is prohibited inside all BAEMS vehicles.
4. The vehicle shall be kept clean inside and out.
5. Vehicle equipment checks must be done by the person accepting responsibility for the vehicle.

Fire Calls

1. The ALS quick response vehicle will only respond emergent to fire calls if there is a potential for a patient. If no patient is reported in the page or the potential for a patient is not there (CO Alarm, fir alarm) it will respond not emergent.
2. Once on scene, the vehicle must be parked to not impede any fire vehicles responding to scene. The vehicle should be parked as to not be blocked in by any responding fire or EMS vehicles.
3. The medic may self-release at any time after the arrival of the ambulance crew.

ALS Intercepts or ALS Mutual Aid where No Ambulance is needed

1. The ALS quick response vehicle will respond directly to the requested location.
2. Once on scene, attempt to park vehicle in field driveway or off the roadway to avoid road hazards.
3. The vehicle engine and lights must be turned off. The vehicle must be secured prior to departure.

Mutual Aid Ambulance needed

1. The Duty Officer will remain in Baldwin's PSA to respond with a back-up transport ambulance.
2. The duty officer will assure coverage in our primary area first, and then assign a crew to respond to the mutual aid call if available.

END

Back to Index ↑

Physician on Scene

Baldwin Area Medical Center Physicians may act as on scene medical control on any call to which they respond. Regions hospital may also appear on a scene and provide support to EMS units. The following policy applies to EMS physicians that are not our contracted medical control.

POLICY:

Medical control should be notified as early as possible in the communication that there is a physician at the scene.

1. Ambulance Personnel Responsibilities:
   - A. Be professional and Identify self to the physician.
   - B. Inquire if physician is licensed to practice medicine in Wisconsin and area of specialty.
   - C. Inquire if physician wishes to be responsible for patient. If so, explain that physician at scene must:
     1. Instruct/supervise prehospital personnel at scene.
     2. Accompany patient in ambulance to hospital.
   - D. Document the identification of any on-scene physician that participates in patient care.

2. Physician at Scene Responsibilities:
   A. If physician declines responsibility, prehospital personnel should follow established guidelines.
   B. If physician accepts responsibility:
      1. Medical control is notified of physician at scene.
      2. No monitoring medical control physician is necessary.
      3. Radio communications are maintained.
      4. Physician at scene accompanies patient to hospital.
      5. Physician accompanying EMS will give a verbal report to the MD at receiving hospital.
   C. If physician wishes to assist only:
      1. Communicates with medical control physician, however, physician at scene has no medical control.
      2. Physician at scene is not required to accompany patient to hospital.

SPECIAL NOTES:
If a physician makes requests of EMS personnel in a clinical (e.g. hospital, clinic or nursing home) setting that are contrary to these guidelines or appear, in the EMS personnel's judgment, to be contrary to the patient's best interests or that a procedure is beyond the crew's level of training and scope of practice, EMS personnel should request that the physician carry out those orders or consult with a medical control physician. Once the on-scene physician is no longer physically present, EMS personnel should follow established care guidelines.
END

Back to Index ↑

Interfacility Transports

Purpose:
To assure that we are providing inter-facility transports in a safe manner from one facility to another.

Policy:
Baldwin Area EMS has a primary responsibility to staff the 911 service area with a Paramedic ambulance, inter-facility transports are secondary in priority to 911 coverage. The purpose of this policy is to define the appropriate use of EMS personnel utilized during an inter-facility transfer.

This policy addresses the appropriate transfer of a patient by ambulance with an emergency medical condition, who has been stabilized by the transferring facility, accepted by the receiving facility and transported with appropriately qualified personnel. Prior to initiating any transfer, the transferring physician has the responsibility to perform a medical screening exam to determine if the patient has an emergency medical condition, stabilize (if possible) and prepare the patient for the transfer.

Prehospital providers that participate in inter-facility transfers must follow written these written guidelines and have appropriate training for the particular type of patient they will encounter. At all times operate within your scope of practice as approved by Medical Direction.

If Baldwin Area Medical Center determines the patient is in need of inter-facility transport, the hospital shall call the Baldwin Area EMS Duty Officer at 715-760-1491.

Modes and Level of response: See chart below.

1. The physician can request a *response mode*:
    a. **Emergency Response** = If a patient at a health facility has an emergency medical condition which needs to be evaluated or stabilized by a physician at the receiving hospital in a rapid manor. Does not always mean lights and siren, only an immediate response.
    b. **Non-emergency Response** = A request for transport of a patient who does not have, or is not perceived to have, an emergency condition but needs ambulance transport to a higher level facility or for a procedure not currently available at Baldwin Area Medical Center.
2. The *level of response* will be determined by the attending physician at the facility. The physician can request one of five levels: EMT, Advanced EMT, Intermediate, Paramedic, and Critical Care Paramedic.
3. Baldwin Area EMS employees Registered Nurses. They may operate to the Paramedic level of service, or if CEN or Critical Care certified to that level of service as determined by the Medical Director(s).

INTERFACILITY CONTINUED…

EMT/Medic Instructions at Baldwin Area Medical Center:

1. Once at the hospital, obtain a verbal patient report from an appropriate hospital staff, complete an inter-facility transport form (see forms section).
2. Collect the patient's records for the receiving hospital, including any x-ray/CAT scan CD/MRI being transferred with the patient. Patient belongings being transported (encourage family members to take belongings. Document what you accept and where it is left at receiving hospital).
3. Collect a face sheet and PCS form, and if necessary have the patient sign the ABN or Medicaid form.
4. Obtain and document a set of vitals prior to leaving the facility. If unable to obtain vital signs, document why they are unobtainable.
5. Transferring Physician remains medical control until receiving facility accepts patient by signing paperwork.
6. Document the patient's condition during transport. If patient's condition deteriorates or there is a significant change, consider ALS intercept or diverting to the closest hospital.
7. Call in report to the appropriate receiving hospital.

Monitoring during transport:

All patients being transported shall have an appropriate level of monitoring:

1. Continuous EKG monitoring
2. Intermittent measurement of: Rate, Pulse rate, Continuous monitoring by pulse oximetry, Blood pressures, etc.
3. Intubated patients receiving mechanical support of ventilation should have airway pressure monitored. If a transport ventilator is used, it should have alarms to indicate disconnects or excessively high airway pressures. SPo2 monitoring.
4. A medical record documenting the patient's status and management during the transport is required.

Minimum equipment during transport:

1. All Baldwin Ambulance units are equipped per state regulations with sufficient levels of stock for transfers. All Staff shall be trained on all equipment within their scope of practice. Paramedics, Critical Care Paramedics and RN's shall be knowledgeable on the use and trouble shooting of service and Hospital owned IV pumps, ventilators, etc.

Back to Index ↑

Interfacility Transports

24/7 CALL: 715-760-1491

The Baldwin Area EMS Duty Officer will need to know: Patient age and sex, diagnosis and treatments being performed or needed/monitored enroute, level and priority below, and destination. They may have other questions that they need to ask.

Level of Care requested:

Critical Care Paramedic Transport	**Unstable/Critical patient transport by CCTP certified Paramedic crew:** ✓ BiPap patients ✓ Unstable cardiac/Respiratory, or severe burn patients ✓ Blood or multiple medicated IV infusions ➢ ***Acute patients with a higher potential of deterioration enroute***
ALS *(Advanced Life Support)* **Paramedic Transport**	**Unstable patient transport by ACLS certified Paramedic crew:** ✓ Intubated patients ✓ Cardiac monitoring/External Pacing ✓ Monitor antibiotic and medication infusions ✓ Advanced airway procedures ✓ Pain control. ➢ ***Acute patients with a lower potential of deterioration enroute***
BLS *(Basic Life Support)* **EMT Transport**	**Stable patient transport by Emergency Medical Technician crew:** ✓ Basic airway (Oxygen and suctioning) ✓ IV monitor of NS (no medications) ✓ Advanced first aid skills/equipment ✓ No cardiac monitoring needed ✓ Routine transfer of patient for specialty care or testing at another facility ➢ ***Stable patients with no potential of deterioration enroute***
Non- Emergent Ambulance Transport	**Patient can Ambulate** ✓ Return to nursing homes, must have PCS completed prior to transport ✓ If No Medical Necessity is established on the PCS form for Ambulance transport, the cost may be billed to patient ➢ ***Stable patients with no potential of deterioration enroute***
Bariatric Transport Unit	**All levels of care** ✓ Over 450 lbs. ✓ Will be arranged for you by Baldwin Area EMS through mutual aid partners, will take up to several hours for transport to arrive.

If you are unable to get a hold of the Duty Officer, please contact dispatch, 715-386-4701, and request Baldwin EMS for a transfer. Dispatch will have to go through their EMD protocols, which will be a series of questions, so please have patient information ready.
If the Hospital is unable to get a hold of the duty officer, you can call the Chief's Phone: 715-495-6729.

Other service to contact for an Interfacility Transports if needed:

St. Croix County

River Falls EMS, Call dispatch 715-386-4701
Hudson EMS, Call dispatch 715-386-4701
New Richmond EMS, Call dispatch 715-386-4701

Pierce County

Ellsworth EMS, during business hours 715-273-4879, after hours call Pierce County Dispatch 715-273-5051
River Falls EMS, Call Pierce County Dispatch 715-273-5051

Interfacility Transports Guidelines for the Baldwin Duty Officer

If Baldwin Area Medical Center needs to request a transport, they will call the

Duty Officers cell phone, 715-760-1491.

The Duty Officer will then obtain the need information for the transfer:

-Is it emergent on non-emergent

-Where does the patient need to go

-What interventions have been done?

-What interventions are currently in place (IV pumps, antibiotics, on a vent)

-And any other information the Duty Officer feels is necessary to patient care.

The Duty Officer will be able to inform the hospital if Baldwin EMS will be able to take the call.

If we can take the call:

-The duty officer can call dispatch and have it paged it out, or they can call the crew and give them the heads up, then notify dispatch.

If we can't take the call:

-The duty officer, if able, will contact the appropriate dispatch center and request a specific service to take the transfer. If able, please contact the service ahead of time to see if they are able to take the transfer.

-If the Duty Officer is not able to contact another service due to being committed to a call, advise the hospital that we are unable to take the transfer, and then request they call a certain service.

Non-Transport/Patient Refusal

For refusal of assessment and treatment, advise the person you believe they should be seen by a medical doctor. Obtain the persons basic demographic information and signature of refusal.

For persons accepting scene care, but refusing transport:

1. Each patient shall be given a complete physical assessment, head to toe.
2. The run report of **each patient** refusal must include the following:
    A. Results of physical assessment
    B. Visual observations, such as "The patient is up walking around with no apparent injury."
    C. Complete set of vitals including blood sugar.
    D. Mental status assessment. Patient should be:
        1. Alert, Oriented X 3: the patient knows who they are, where they are, and the day/date
        2. Coherent: speaking in complete sentences with logical thought processes.
        3. Articulate: speech is distinct and understandable.
        4. Able to understand the EMS provider, which may involve the use of a telephone interpreter.
        5. Absence of any one of the above may indicate an inability to make good decisions
        6. (Incompetence). Incompetent patients cannot legally refuse medical care.
    E. Reason for the patient's refusal.
    F. Attempts to get others involved, such as "Family members were unable to convince the patient to be transported." And Consequences explained, such as "The patient was informed that he may suffer serious physical harm, injury, or death if he is not transported."
    G. Alternatives explained, such as "The patient was instructed to seek alternative transportation or call personal physician for advice." Inform patient of their right to call 9-1-1 again.
    H. Concluding statement to each incident of patient refusal shall be the following: "Patient was strongly advised to seek medical attention as soon as possible."
    I. Signature of the patient (or legal guardian if a minor) on the run form, and have the patient or legal guardian sign the narrative, after it has been read to them. If patient refuses to sign, write "refused" in signature area and have witness to refusal sign as well. Witnessed.
3. Document physician name or medical control operator number on the run form.
4. Patients not transported for the following conditions have additional requirements: possible head injury, seizure, wounds or lacerations, hypoglycemia, motor vehicle accidents, syncope, choking or foreign object ingestion, and sprains or contusions:
    A. If the decision is made to not transport an adult patient with any of the above conditions, a non-transportation information sheet must be left with and explained to the patient/caregiver.
    B. Document on the report a non-transport instruction sheet was left with patient.
5. Intermediate, Paramedic, CCTP, RN may clear a patient for non-transport following a hypoglycemic episode if the patient:
    A. Is now conscious, alert, and oriented, and is able to manage their diabetes, and
    B. Has a blood sugar of at least 80 mg/dL, and
    C. Is left with written non-transport instructions for hypoglycemia, and
    D. Is at least 2 years of age (minors must be in the care of an adult)

SPECIAL NOTES:

1. Alcohol or chemical intoxication does not justify inaction and may render a patient incompetent. Call medical control for advice.
2. In the event that the parent or legal guardian of an uninjured or non-ill minor cannot be reached, the child may be left in the care of a responsible adult (> 18y.o.), after consulting with a medical control physician. Consult with medical control regarding non-transport of emancipated minors.

a. An emancipated minor is anyone under the age of 18 years who: (1) has been married; (2) is on active duty in the uniformed services of the United States; (3) has been emancipated by a court of

competent jurisdiction; (4) is deemed financially independent; or (5) is otherwise considered emancipated under Wisconsin State law.

3. See *forms section* for non-transport information form.

END

Back to Index ↑

DO NOT RESUSCITATE (DNR)

PURPOSE:

Baldwin Area EMS recommends that the decision to withhold cardiopulmonary resuscitation (CPR) rest with the patient and his/her physician and that our prehospital personnel honor directives limiting CPR in individuals who have refused this treatment. This guideline is intended to delineate the appropriate response by emergency medical personnel to a valid Do Not Resuscitate (DNR) order in the event of a request for emergency medical assistance.

BACKGROUND INFORMATION:

It is customary medical practice that CPR is performed on all persons found to be in cardiac arrest, in the absence of directives from a primary physician to withhold such action. There are individuals who would decline these therapies or for whom the treatments are without benefit. Such persons may legally and ethically decline these treatments. The DNR order is a written order by physicians under Chapter 154 of the Wisconsin Statutes to direct emergency medical technicians, first responders, and emergency health care facilities personnel not to attempt CPR on a person for whom the order is issued if that person suffers cardiac or respiratory arrest. Specifications for DNR bracelets and the procedures for these emergency health care providers to use in following a DNR order are described in Administrative Code HFS 125.

CONDITIONS FOR A LEGAL DNR ORDER UNDER ACT 200:

Only an attending physician may issue a DNR order under Act 200. The attending physician may issue a DNR order for a patient only if ALL of the following apply:
The patient is a qualified patient.
The patient requests the DNR order.
The order is in writing.
The patient signs the order.
The physician does not know the patient to be pregnant.

DNR BRACELET:

The physician or designee attaches a standardized DNR bracelet after all prerequisites have been met. Hospitals, clinics, etc. supply the bracelet. The bracelet must:
Be clear and made of plastic that is at least ¾" wide
Have an insert distributed by the DHFS that has a preprinted logo of the State of Wisconsin; Have the words "Do Not Resuscitate" in blue or a Medic Alert bracelet with the statement "Wisconsin-DNR-EMS".
Have the required information printed in size 10 font or greater.
Have on the left half of the insert: patient name, address, date of birth, and gender
Have on the right half of the insert: physician's name, business telephone number, and signature

PROCEDURE FOR CARING FOR PATIENTS WITH A VALID DNR BRACELET:

Assess the patient's airway, breathing and circulation.
If pulseless and nonbreathing, check the patient's wrist for the state-approved DNR bracelet.
If no bracelet is found on the wrist, provide usual care.
If a nondefaced bracelet is found on the patient's wrist, do not initiate life support measures. Emergency health care personnel only honor DNR orders when they see a valid DNR bracelet.
Health care will be provided to DNR patients with only full resuscitative care being withheld. Comfort care (such as suction, oxygen, and oral/nasal airways) should be given, but no life sustaining cardiac or

pulmonary care (such as advanced airways [Combitube or endotracheal tube], bag-valve-mask, and demand valve resuscitation, defibrillation or chest compressions) will be provided.

CONDITIONS THAT INVALIDATE A DNR ORDER:
The patient has revoked the DNR order or expressed to the emergency health care provider the desire to be resuscitated. The emergency health care provider should then promptly remove the bracelet.
The DNR appears to have been tampered with.
The emergency health care provider knows that the patient is pregnant.
The patient destroys the bracelet.
The patient removes or asks someone to remove the bracelet.

SPECIAL CIRCUMSTANCES INVOLVING CARRYING OUT DNR ORDERS:
In the event a patient changes his/her mind regarding the DNR order prior to cardiac arrest, family members request resuscitation or disagreement occurs at the time of cardiac arrest, resuscitative measures should be initiated by pre-hospital personnel and treatment decisions should be made by the physician responsible for care.
Valid written DNR orders that are current and signed by the physician, patient, and appropriate witness may be honored in the absence of a DNR bracelet, but they must be *physically* available and readable to the emergency health care provider.
Contact medical control if there is any doubt about honoring the order.

IMMUNITIES PROVIDED UNDER THE LAW: No physician, emergency medical technician, first responder, health care professional or emergency health care facility may be held criminally liable, or charged with unprofessional conduct, for any of the following:
Under the directive of a DNR order, withholding or withdrawing resuscitation from a patient;
Failing to act upon the revocation of a DNR order unless they had actual knowledge of the revocation;
Failing to comply with a DNR order if they did not have actual knowledge of the DNR order or if the person, in good faith, believed the order had been revoked.

END

Back to Index ↑

Death/Termination of Resuscitation

Ambulance personnel may forego resuscitation on patients who are obviously dead at the scene or who have confirmed Do Not Resuscitate (DNR) orders.

Obvious Death is indicated by no cardiac or respiratory activity *in a warm patient* combined with any of the following: rigor mortis, lines of Lividity (pooling of blood in the dependent areas of the body), decapitation, severed trunk, 100% BSA full thickness burns):

1. Obtain and document history including:

A. How long down or when last seen alive?
B. Medical history. Was death expected or unexpected death?
C. Any resuscitative efforts prior to EMS arrival?

2. Perform physical exam and document assessment of:
   A. Absent pulses; the carotid and one other and Absent respirations
   B. Fixed and dilated pupils
   C. Rigor mortis
   D. Pooling of blood in the dependent (lowest areas of the body) due to gravity (AKA Lividity)
   E. Injuries incompatible with life (decapitation, severed trunk, 100% BSA burns)

Medical control clearance

A. Medical control clearance is not required for patients who meet the criteria above.
B. Contact medical control with any questions/concerns; especially if possibility of hypothermia.
C. Once resuscitation* (CPR) has begun, it may be terminated only AFTER physician declaration (in person or via radio communication) unless there is a valid DNR order present.

Terminate resuscitation: (ALS ONLY) If after a full assessment of possible causes (H's and T's) and up to 20 minutes of ACLS care, an arrest may be called in the field by Paramedic/RN personnel:

1. AHA Cardiac arrest algorithms should be followed for a minimum of 20 minutes, then consultation with family and medical control before ending resuscitation efforts.
2. If a patient is in Asystole/PEA an ECG confirmation with printed strip in two leads and assessment of heart and lungs. If the Paramedic questions the viability of the patient or the EMT cannot adequately confirm an obviously dead patient from the assessment above.

TREAT AS CRIME SCENE: To the extent possible, try to avoid disturbance of possible crime scenes and leave bodies at the scene in position found whenever possible and practical. Often times Police want to limit the access in the area, the Duty Officer or Lead Paramedic on the ambulance should enter the scene to verify death, not entire crew.

SPECIAL NOTES:

1. If there is any doubt about patient viability, initiate resuscitation measures immediately.
2. Patients found in cold environments may still be viable despite cold body temperature.
3. *"Resuscitation" = (CPR) or any component of CPR, including cardiac compression, artificial ventilation, defibrillation, administration of cardiac resuscitation medications and related procedures. It does not obligate EMS personnel to attempt aggressive resuscitation in cases where the attempts will likely be futile, but continue with basic life support (BLS) resuscitation until physician contact can be made.
4. Patients not pronounced at the scene due to continued resuscitative efforts, family situations, or rescuer safety issues are transported to the closest hospital.
5. For patients being transported to a Hospital, if death occurs enroute:
   A. If patient is brought into hospital for treatment and is later pronounced, hospital staff handles.
   B. Patients who die enroute to a hospital in Ramsey or Washington County - Medical Examiner must be called by dispatch and bodies transported to the Ramsey County Morgue (at Regions).

END

Back to Index ↑

Emergency Transport Hold

PURPOSE:

Wisconsin Statute 51.15 (Rights of Detention), 55.05 (Voluntary Protective Services), and 55.06 (Protective Services and Protective Placement; eligibility) allow for the involuntary detention of a patient by a law enforcement officer, for the transport of that patient to a medical facility, to protect that patient or others from imminent harm. A competent person of legal age has the right to refuse/consent to medical assessment, treatment, and transportation. However, if there is reason to believe that the patient is mentally ill*,

developmentally disabled (suffering from the infirmities of aging or other like incapacities, and is so, totally incapable of providing for his or her own care or custody, as to create a substantial risk of serious harm to oneself or others), chemically dependent or intoxicated, then a law enforcement officer may take the patient into custody and transport him/her (or order them to be transported) to a medical facility for treatment.

POLICY:

1. Every time a patient is transported against his/her will for the above-mentioned reasons, a Statement of Emergency Detention (example in Forms section) must be completed.
2. If, after assessment, the patient is refusing treatment and transport and, in the judgment of the EMS provider, the patient requires further medical attention, but is incompetent and therefore incapable of giving informed consent or making an informed refusal, a Statement of Emergency Detention should be obtained from and completed by law enforcement personnel. The patient may then be transported against his/her will to an appropriate medical facility for further evaluation and treatment.
3. Whenever possible, attempts should be made to get an on-scene peace officer to sign the transport hold. If an officer refuses, or is not present to sign it, verbal authorization from an on-line physician may be obtained through medical control in Baldwin or MC at our backup through MRCC at Regions.
    A. If the patient is transported to Regions Hospital, the crew can pick up the form from MRCC when they arrive.
    B. If the patient is transported to a facility other than Regions Hospital, the MRCC operator is responsible for obtaining the physician signature and then faxing a copy of the form to the receiving facility, where the crew may pick up the form upon arrival.
4. One copy of the form must be left with the patient run report form at the receiving hospital, one copy must remain attached to the original run report form, and one copy must be provided to the patient.
5. The law enforcement officer must accompany the patient in the ambulance or follow the ambulance.
6. Physical restraints are recommended for all patients on transport holds.

SPECIAL NOTES:

1. *Mentally ill includes those patients under the influence of their disease (e.g. stroke, diabetes, Alzheimer's), and those under the influence of their injury (e.g. head injury).
2. **For the purposes of this statute, a health officer is a licensed physician, psychologist, psychiatric social worker, or psychiatric or public health nurse. EMTs and paramedics are not considered health officers. A peace officer is a sheriff, municipal or other local police officer, or a state patrol officer when engaged in the authorized duties of office.
3. An emergency transport hold authorizes the transport of an incompetent patient to a medical facility for further evaluation only. It does not automatically commit the patient to a 72-hour hold.
4. A transport hold is not necessary if the patient is under arrest and a peace officer is either accompanying the patient in the ambulance or following in a squad car.
5. Patients who are transported on a hold should be transported to a hospital where they have received care or within their own medical group/insurance company whenever possible.

END

Back to Index ↑

Destination Choice/Prehospital Alert Criteria

Purpose:

To assure that patients with special medical or trauma needs are transported to the most appropriate facility. TTA (Trauma Team Activation), Code STEMI, Code Stroke, OB Emergencies, Pediatric Emergencies.

Policy:

Patients should be transported to the hospital of their choice within local distances. However certain circumstances in which the patient's choice may be over-ridden by on-line medical direction or Duty Officer

discretion using the following appropriate considerations: (Note: Duty officer shall notify BAMC Medical Control of destination choice, they are still medical control hospital).

Procedure:
Patient should be transported to the closest most appropriate hospital.
Appropriateness is determined by:

- Specialty needs of the patient (pediatric, trauma, cardiac, etc.)
- hospital's capacity to meet these needs
- Hospital diversion status
- Patient preference (within local area: Baldwin, Hudson, New Richmond, River Falls, Menomonie)
- Patients medical home (within local area as above)
- Weather (road conditions)
- Service area requirements and needs (Staffing, vehicles, etc.)

Level 1 by-pass: Baldwin Area EMS may by-pass local hospitals to go directly to a level one center for Trauma (TTA Activation), or STEMI, if airway is managed.

Trauma Team Activation Criteria
ALS units can call a Trauma Team Activation (TTA) from the field when one or more of the signs and Symptoms listed below are present or when the paramedic feels the patient is unstable due to a traumatic injury. **BLS units should contact the medical control physician at BAMC before leaving, or contact MRCC for a TTA evaluation.** The following are TTA criteria:

A. Glasgow coma score < 14
B. Hemodynamically unstable (Adult: SPB < 90 mmHg; Pediatrics: 70+2*age)
C. Airway compromise
D. Penetrating trauma to the head, neck, torso, or proximal extremities (above elbow or knee)
E. Two or more proximal (above elbow or knee) long bone fractures
F. Pelvic instability
G. Limb paralysis
H. Amputation above the wrist or ankle
I. Trauma with major burns
J. Flail chest
K. Temperature <90 degrees Fahrenheit
L. Traumatic cardiac arrest

TTAs are called based on the anatomic and physiologic criteria listed above. They are **not** called based on mechanism of injury. **Mechanism of injury may mandate that the patient be transported to a Level 1 Trauma Center but mechanism alone does not warrant a TTA.** There may be times when patients have significant mechanisms of injury but appear to be stable. If the provider feels that a patient is a candidate for evaluation at the trauma center, the EMS provider should bring the patient to the trauma center. **(Note: Regions Level I Adult and Pediatric Hospital or Hennepin County Medical Center).**

Destination continued…

Code STEMI: Cath Lab Activation: Patients with cardiac symptoms who have ST elevation of > 2mm in two or more contiguous v-leads or >1mm in the limb leads, and the QRS complex is narrower than 0.12 (3 small boxes) seconds, should be transported to a Level 1 Cardiac Center. **(NOTE: United Hospital, St. Joe's Hospital, and Regions Level I Trauma Hospital).**

Code Stroke: Any patient exhibiting signs of **acute stroke**, defined as exhibiting 1 of the 3 signs and symptoms measured on the Cincinnati stroke scale score and symptom onset of 8 hours or less and normal blood glucose qualifies for a Code Stroke prehospital alert. Patients exhibiting signs and symptoms for **non-**

acute stroke (positive Cincinnati stroke scale and symptom onset of greater than 8 hours) DO NOT qualify for a Code Stroke prehospital alert. EMS providers should speak to BAMC regarding tele-stroke activation, or call MRCC for Level One Stoke activation when by-pass of local hospital is advised by Medical Control.
(Note: United Hospital, Regions Hospital, or St. Joe's Hospital)

Burn Center: Patients with second or third degree burns > 10% TBSA, burns to hands, face, feet, perineum, or major joints, electrical burns, including lightening, chemical burns, especially hydrofluoric acid burns, and inhalation injuries. Patients with underlying or pre-existing medical conditions that may prolong recovery, complicate management, or affect mortality. Patients with concomitant trauma.
(Note: Regions Level I Hospital or Hennepin County Medical Center)

Hyperbaric Centers: Patients with symptoms of severe CO poisoning including: history of loss of consciousness, lethargy, confusion, disorientation, seizures, focal neurological deficits, ischemic chest pain, new dysrhythmias, 12 lead ECG changes, hypotension, or the pregnant patient should be transported for possible hyperbaric therapy. Patients in cardiac arrest should be transported to the closest facility.
(Note: Hennepin County Medical Center only for Hyperbaric Center)

Specialized OB Centers: Patients in active labor who are between 20 and 32 weeks gestation (5-8 months), anticipated to have or are having complications with delivery should be transported to the most appropriate facility and should have early alert of the patients OB physician.
(Note: United Hospital with a Level III Nursery).

Pediatric Centers: Critically ill children should be considered by on-line Medical Direction.
(Note: Children's Hospital St. Paul for illness or for Trauma Regions Level I Pediatric Hospital)

***Stab*ilization *Room*:** Patients transported by EMS to United, HCMC or Regions Hospital who are critically ill or injured, in severe distress, do not meet the current TTA, Cath Lab, or Code Stroke criteria, and would benefit from immediate physician evaluation can be called a **"STAB ROOM"** patient. Examples of patients who are candidates for STAB ROOM requests include (but are not limited to): Status epilepticus, severe COPD on CPAP, open or severely painful fractures, hypotensive medical patients, unstable cardiac arrhythmias, any unstable vital signs in a non-trauma patient, choking patients, status asthmaticus, or OD with depressed LOC or unstable vital signs. This list is not all inclusive, and the paramedic should feel comfortable requesting a STAB ROOM on all patients meeting the above criteria.

END

Back to Index ↑

Hospital Diversion - WI*TRAC*

Status definitions are 1 of 2 choices, either "Open" or "Divert". The word "Open" means that the Emergency Department will accept all BLS and ALS ambulances. The word "Divert" means that the hospital will not receive any ambulances (BLS or ALS). Four, and only 4, exceptions to the diversion status are acceptable allowing ambulance transport to a hospital on "Divert":

1. Specialty hospitals never close to their specialty (i.e. Burns, pediatrics, hyperbaric, trauma)
2. Hospitals never close to women in labor if that hospital is the closest most appropriate destination (i.e. Patient received prenatal care there)

3. A patient is a direct admit
4. A pre-arranged transport following EMTALA guidelines (i.e.: Patient recently discharged from that hospital or patient coming from an affiliated clinic site)

Divert Status Override

1. If it is reported to Baldwin Area EMS that local hospitals within reasonable distance to patient acuity are closed, the ambulance crew will continue to the closest appropriate hospital to care for the patient.
2. EMS Crews may contact MRCC for further advice on transport destination or hospitals on divert status.
3. Once the ambulance personnel have given their report to the receiving destination hospital, the ambulance cannot be diverted.

END

Back to Index ↑

Photographic Documentation

Purpose:

Establish a procedure for obtaining, maintaining, protecting and releasing photographic documentation.

Policy:

Photos should only be taken in situations when a photograph would help to explain the mechanism of injury to the receiving physician. Examples of this would include motor vehicle crashes, or when a patient is trapped in or under something. The picture should only be taken by the duty officer or chief and the duty officer is to only use the duty officer's phone or the chief's phone. Once the picture has been taken and shown to the physician, it is to be deleted from the phone. Any person seen taking photos of a patient or of a crash site could face disciplinary action by the chief. Any person posting or sharing pictures of patients or of any ambulance scene on Facebook or any other social media source will face disciplinary action as this is a HIPPA violation. Removal from the service could result. If a photo is taken and then deleted, that information should be included in the narrative, and with names of the person that deleted the photo, and of a witness.

Back to Index ↑

Response with Police

EMT obligations at the scene of a violent crime:

A. Immediately notify law enforcement, if scene is not safe, back out and leave, or do not approach.
B. If the patient is obviously dead, the body and surrounding scene shall remain undisturbed.
C. Do not touch, move, or relocate any item at the scene unless absolutely necessary to provide treatment to an injured victim. Mark the location of any item that must be moved.
D. No onlookers or other unauthorized personnel on the premises of the crime scene.
E. Observe and note anything unusual, especially if the evidence may not be present when law enforcement arrives, i.e., smoke and odors.
F. Give immediate care to the victim.
G. Keep detailed records of the incident including observations of the victim at the scene
H. Once law enforcement arrives, do not hinder their work. Restrict your movements to those which relate to patient care. Give any information to the police which may be helpful but keep conversation to a professional level. Do not draw conclusions, but make observations.

The police have broad legal authority to enforce the law. They also have the equal right to control a situation to the degree that it does not needlessly hinder emergency care. Law enforcement may let EMS personnel perform their work unhampered if they understand the reason and need for treatment, and are sure that the treatment will not delay them from their rights to enforce the law. If a conflict should exist between the EMS personnel and law enforcement the following guidelines shall apply:

A. Meet with law enforcement in private and try to agree on an approach that will satisfy their needs along with your own.
B. Explain why the treatment is needed, and how law enforcement work may hinder the treatment.
C. If they still refuse to let you start treatment, diplomatically advise that the incident will be noted in the run form.
D. Remember that they also have a duty to perform.
E. If an agreement cannot be reached, you must give in to their demands, continue the treatment allowed and never abandon the patient.
F. You are not required to perform services or treatment demanded by law enforcement.
G. You can advise the patient about limits placed on treatment by law enforcement.
H. Contact Medical Control and advice of the situation.
I. Document objectively and clearly.

END

Back to Index ↑

Response with Tactical ERU

The purpose of this guideline is to outline care that should be rendered while involved in a tactical environment. Keeping in mind —tactical may mean involvement with Law Enforcement, but could also reflect care in an austere/disaster type situation. The basis of this guideline is in-line with the tenants of TCCC (tactical combat casualty care) as outlined in PHTLS. The three phases of care are as follows:

1. **Care Under Fire**: where the hostile act or disaster is still in progress,

2. **Tactical Field Care:** care rendered while the hostile act or disaster is in a lull, but keep in mind this is dynamic and may revert back to care under fire.
3. **Tactical Evacuation:** this is care rendered while transporting the injured to definitive care. The expectation is that a higher level of care is given in this phase and may include ALS providers.

Care under Fire: (EMT, AEMT, I and P) Safety of the EMS provider is paramount, if gunfire is being exchanged, seek cover and do not attempt medical intervention unless escorted by armed law enforcement personnel. Equipment should be kept to a minimum to ensure rapid movement and extrication of the patient.

1. Address **massive extremity hemorrhage** with the use of an approved commercial tourniquet. Apply as high on the extremity as possible and tighten till bleeding stops. For hemorrhages not amenable to a tourniquet the wound should be packed with an approved Hemostatic agent, direct pressure should be applied over the Hemostatic agent for 2-5 minutes. Bleeding control should be confirmed before applying a pressure dressing over the wound. Frequent re-assessment should be done to check for re-bleeding.
2. Penetrating Torso Trauma should rapidly be addressed. Shortness of Breath in the presence of penetrating trauma is the indication for immediate chest needle decompression. If your scope of practice allows for needle decompression, remember to apply a full occlusive dressing(s) to entrance and exit wounds. If your scope of practice does not allow for needle decompression, apply an occlusive dressing that is not taped on all sides. Check patient for improvement of respiratory effort. EMT and AEMT should apply and occlusive dressing that allows the wound to vent one-way (Asherman™ Chest Seal®, Bolin Chest Seal®) or apply a 3-sided occlusive dressing that may be burped to relieve any tension. Immediate ALS intervention is needed to facilitate a chest needle decompression.
3. Airway compromise: Any patient found with airway compromise should be placed in position that best maintains airway i.e. sitting and leaning forward to allow secretions to drain. Insert Nasal Pharyngeal Airway if likelihood of patient becoming unconscious.

Tactical Field Care: (EMT, AEMT, I and P) Keeping in mind this phase may be dynamic, the environment in which the EMS provider is working must constantly be reassessed for unstable changes and safety concerns.

1. Wounds that have been addressed with tourniquets should be reassessed and if bleeding continues a second tourniquet should be applied 2-3 inches above the point of wounding. Once applied and bleeding controlled, the first tourniquet can be slowly removed. If Hemostatic agent was used, continue to reassess the wound, re-apply additional pressure dressing and direct pressure.
2. If airway compromise continues, consider definitive airway per scope of practice (i.e. Non-Visualized Airway (King airway) or Endotracheal Intubation. Assist ventilations as needed and continue to reassess. With massive facial injury and associated airway insult, consider Surgical Airway.
3. If penetrating torso injury and shortness of breath was addressed with occlusive dressing(s) and chest needle decompression, reassess breathing. If patient's respiratory effort does not improve, consider a second needle decompression right next to the first needle insertion.
4. Initiate at least one large bore IV 18-16 gauge and infuse boluses of 250cc-500cc of 0.9% NS not to exceed 2000 ml if possible. Attempt to keep systolic BP around 90mmHg. *(**Key Point**…Bleeding must be identified and stopped. Over hydration of IV fluids reduces the remaining blood volume's ability to carry O2 and clot).*
5. Prevent heat loss. Cover patient even in warmer months to help prevent complications associated with clotting abnormalities.
6. Address pain control with short-acting narcotics (drug profile # 035, guideline 112)

Tactical Evacuation: (EMT, AEMT, I and P) This Phase of TCCC is much like mainstream EMS transportation. The expectation is that an ambulance would be able to provide oxygen, cardiac monitoring, pulse oximetry, vital signs, and protection from the elements (i.e. warmth and light.)

1. Constantly monitor for bleeding. Ensure tourniquet is tight and has not become loose during patient movement (there **should** be an absence of distal pulse in the extremity that has a tourniquet applied). Bandage all wounds as appropriate.
   A. Monitor Vital Signs, frequently assess for oxygenation and perfusion.
   B. Provide psychological support for the patient
   C. Complete documentation of events and rational for use of Tourniquets and Hemostatic MUST be explicitly detailed.
   D. Patient must be transported to appropriate Level 1 Trauma Center.
2. Contact medical control from scene to ensure early notification and appropriate trauma activations.

END

Back to Index ↑

Entering a Crime Scene

This guideline will be used when law enforcement personnel advise EMS that they have responded to a crime scene or EMS determines that a crime scene may exist. Traffic accidents are considered a crime scene.

The purpose is to ensure the protection of patient welfare as well as to ensure the ability to conduct an effective and thorough investigation.

RESPONSE & ON SCENE PROCEDURES

1. Once advised by law enforcement of the potential of a crime scene, get whatever pertinent information needed and ask for instructions once you are on scene.
2. When approaching a potential crime scene that is being protected by law enforcement personnel, the lead EMT may request entry into the area to determine life status of the individual.
3. If law enforcement personnel refuses EMS access to the crime scene, do not become upset. Notify the EMS Chief or Duty Officer immediately.
4. A law enforcement officer and medical examiner should be requested through dispatch as soon as you discover a person is 10-79 (obviously dead). If it is potentially a crime scene, it should be protected as much as possible until law enforcement arrives. Do not leave the scene unless it is unsafe for you to stay. They should be requested for industrial accidents, suicide, electrocution, Death (any nature/cause), drowning, and fatal accidents.
5. **DO NOT** attempt resuscitation if the patient has no pulse, no spontaneous respiration, AND meets criteria outlined in Medical Direction Guidelines "Obviously Dead".
6. If treatment and/or resuscitation are warranted, follow appropriate Medical Direction Guidelines, since patient care takes priority over the crime scene. Try to disturb as little as possible on the scene when caring for a patient.
7. When on scene and you need to examine the victim:
    a. Keep your medical equipment close to the victim.
    b. Stay close to the body.
    c. Keep your hands out of any blood that has pooled.
    d. Do not wander around the scene.
    e. Minimize destruction of the patient's clothing. If the patient's clothing has a puncture, do not use the hole in the clothing to start cutting. Begin cutting at another part of the garment. Removed clothing should be left with the patient to be collected by law enforcement personnel.
    f. **DO NOT** go through the victim's personal effects, clean the body or cover the body with a sheet or other material (if patient is expired).
    g. **DO NOT** move, take, or handle any object at the scene or litter the crime scene with medical equipment, dressings, bandages, etc.
    h. If resuscitation efforts are deemed necessary, transfer the victim from the scene to the vehicle expeditiously and stabilize the victim in the vehicle, when possible.
    i. If the patient relates any information relating to the crime, while in transit to the medical facility, inform law enforcement personnel at once.

Document all actions by EMS on scene.

Motor vehicle and ATV crashes are crime scenes. Attempt to avoid driving through debris field, skid marks, etc. Do not move or kick debris from scene. If automobile is on and you turn off the key, make sure law enforcement is aware of it. If EMS removes seat belt, this should be noted in report as well.
END

Back to Index ↑

Forced Entry

Occasionally, EMT's may be faced with a situation where an ambulance has been called to a residence and no one appears to be present in the home. In that a situation may exist where the patient is believed to be alone and is now medically unable to unlock a door or verbally respond, the EMT's may consider using forced entry.

Forcible entry will be used only in case of true emergencies where other measures to obtain access are unsuccessful. The following procedures are to be followed:

1. If there is no answer at the residence, have Dispatch try the call back number.

2. If the call back number is ineffective, without endangering themselves, EMT's will try all doors and windows.

3. If no unlocked openings to the structure are found and available information indicates that an emergency situation MAY exist, call Dispatch to have a law enforcement officer dispatched.

4. If a medical emergency is known to exist, or available information suggests an emergency does exist, then the following procedures are to be followed:

   A. Forcible entry locations must be assessed that will minimize damage to the structure. However, reasonable efforts to gain access should be made regardless of damage estimations.
   B. All personnel will use extreme caution in providing for their own safety. Protective clothing will be worn for all forcible entry efforts (i.e., breaking windows, etc.), when possible.

5. All pertinent facts of the situation will be documented on the narrative part of the patient form **and** on an incident report.

6. If no emergency is found after forcible entry and no one is in the building, the EMT's will not leave the scene until the police arrive.

7. A police officer will be responsible for seeing that the building is secured.

END

Back to Index ↑

Handling of Patient Valuables

When the patient is conscious and coherent, the handling of valuables is discouraged. If contact with patient valuables (purse, wallet, etc.) is necessary (i.e., to search for medication or identification), it should be done in the presence of at least one witness from outside the Baldwin EMS, such as law enforcement officer or relative, and documented.

When removal of patient valuables is necessary to reduce possible or further injury (i.e., rings on injured fingers), they should be witnessed by a law enforcement officer whenever possible. The valuables must be placed in a tamperproof valuables envelope and placed or taped in plain sight on the patient and documented.

In any and all instances, the handling of patient valuables and their description must be clearly documented on the ambulance report form and the witnesses identified.

In the event a patient valuable is found in an ambulance immediately following an ambulance call, place the valuable in a valuables envelope. Mark the patient's name, date, and time found on the envelope. The EMT who found the valuable must sign the envelope. Two EMT's must return the valuables to the hospital.

If a valuable is found in an ambulance and the owner or origin cannot be immediately determined, the valuable must be placed in a valuables envelope and marked as above. Notify the Chief or Duty Officer to have it picked up. The Chief or Duty Officer must attempt to locate the owner. If the owner cannot be found, the valuable will be turned over to the Baldwin Police Department.
END

Back to Index ↑

Conceal and Carry/Weapons

By law, patients that have a license have the right to conceal and carry weapons. This policy provides a safe environment for all.

1. Baldwin EMS Personnel need to ask patients when enter a scene, "Do you have any weapons on you, do you have anything that could stick, cut, or injure EMS personnel on your person?"
2. Providers should never approach a patient who appears threatening with a weapon, no matter how ill the person seems. Law enforcement should be called to secure the scene and to disarm threatening individuals.
3. If a situation becomes threatening at any time emergency responders should evacuate the scene to a secure place a safe distance away and notify law enforcement immediately
4. Providers should always assume that all firearms are loaded.

Conscious patients willing to relinquish a weapon:
Optimally weapons should be safely secured by the patient at their residence and not be transported with

the patient in an emergency response vehicle.

Conscious patients unwilling to relinquish a weapon:
Patients who are alert and oriented and for whom the emergency response is occurring at their residence should be asked to leave their weapons in a secure location at home prior to transport. Patients can be told that EMS vehicles and most hospitals are "no-carry zones".

If the patient continues to refuse to relinquish the weapon, emergency responders should immediately stop the assessment and refuse transporting to a medical facility. EMS Providers should be suspicious of ill or injured patients unwilling to relinquish weapons. Law enforcement may be called to intervene in the situation.

Patients with altered levels of consciousness:
Patients with an altered level of consciousness, severe pain, or with difficulties in motor functions should not be encouraged to disarm themselves. Contact law enforcement to assist in making the weapon safe, they will unload and secure the trigger. If finding on an unconscious person, EMS personnel should not attempt to remove a weapon from a patient. Regardless of a person's familiarity with firearms, there is no way to know if the gun is in proper working order.

Family that wish to be transported with the Patient:
No family member will be transported with weapon of any kind. Ambulances and Hospitals we transport to are designated as "no-carry zones".

Chain of custody transfer between emergency responders and medical facilities:
Law enforcement will not take a weapon unless the patient has committed a crime. They will make a weapon safe by unloading and placing a trigger lock on it. If a weapon cannot be left on scene (at a patient's residence in a safe manner) the weapon must be handled as a patient valuable. The hospital must be notified and their policies will be followed once in that facility. Complete the chain of custody form in the forms section to leave the weapon with hospital staff.

END

Back to Index ↑

Firefighter Rehabilitation

1. PURPOSE
To ensure that the physical and mental condition of firefighters operating at the scene of a fire call does not deteriorate to a point that affects the safety of each firefighter or that jeopardizes the safety and integrity of the operation.

2. SCOPE
This protocol shall apply to all fire calls where strenuous physical activity or exposure to extreme heat or cold exists.

3. RESPONSIBILITIES

A. Incident Commander – United Fire - The Incident Commander shall maintain an awareness of the condition of each firefighter operating within their span of control and ensure that adequate steps are taken to provide for each member's safety and health. The command structure shall be utilized to request relief and the reassignment of fatigued crews.

B. Medical Commander – EMS Duty Officer or designee - The Medical Commander shall make adequate provisions early in the incident for the rest and rehabilitation for all firefighters

operating at the scene. These provisions shall include: medical evaluation, treatment and monitoring; food and fluid replenishment; mental rest; and relief from extreme climatic conditions and the other environmental parameters of the incident. The rehabilitation shall include the provision of Emergency Medical Services (EMS) at the EMT level or higher.

4. ESTABLISHMENT OF REHABILITATION SECTOR

A. Responsibility: The Incident Commander in conjunction with the Medical Commander will establish a need for a Rehabilitation Area when conditions indicate that rest and rehabilitation will soon be needed for personnel operating at an incident scene. The Baldwin EMS Medical Commander will be placed in charge of the medical rehabilitation and shall be known as the Rehabilitation Officer. The Rehabilitation Officer will typically report to the Incident Commander in the framework of the incident management system.

B. Location: The Incident Commander will normally designate the location for the Rehabilitation Area. If a location has not been designated, the Rehabilitation Officer shall select an appropriate location based on the site characteristics and designations in section C below.

C. Site Characteristics: It should be an upwind location that will provide physical rest by allowing the firefighter to recuperate from the demands and hazards of the emergency operation. The location should be easily accessible by EMS units in case of transport.

It should be far enough away from the scene that members may safely remove their turnout gear and SCBA and be afforded mental rest from the stress and pressure of the emergency operation. It should provide suitable protection from the prevailing environmental conditions.

During hot weather, it should be a cool shaded area. During cold weather, it should be a warm dry area.
It should enable rescue personnel to be free of exhaust fumes from apparatus, vehicles, or equipment (including those involved in the Rehabilitation Sector or Group operations).

It should be large enough to accommodate multiple crews, based on the size of the incident and be capable of setting up fans, tarps, etc. It should allow prompt reentry back into the emergency operation upon complete recuperation.

D. Resources: The Rehabilitation Officer (Medical Command) shall secure all necessary resources required to adequately staff and supply the Rehabilitation Area. The supplies should include the items listed:

I. *Medical* – EMT's, blood pressure cuffs, stethoscopes, oxygen supplies, cardiac monitors, thermometers, and intravenous equipment/fluids as needed.
II. *Food* – soup, broth, or stew in hot/cold cups and sandwiches as needed.
III. *Fluids* – water, activity beverage, oral electrolyte solutions and ice.
IV. *Other* – awnings, fans, tarps, smoke ejectors, heaters, dry clothing, extra equipment, floodlights, blankets and towels, traffic cones and fire line tape (to identify the entrance and exit of the Rehabilitation Area.

5. GUIDELINES

A. Hydration - A critical factor in the prevention of heat injury is the maintenance of water and electrolytes. Water must be replaced during exercise periods and at emergency incidents. During heat stress, the firefighter should consume at least one quart of water per hour. The re-hydration solution should be a 50:50 mixture of water and a commercially prepared activity beverage and administered at about 40°F. Re-hydration is important even during cold weather operations where, despite the outside temperature, heat stress may occur during firefighting or other strenuous activity when protective equipment is worn. Alcohol and caffeine beverages should be avoided

before and during heat stress because both interfere with the body's water conservation mechanisms. Carbonated beverages should also be avoided.

B. Nourishment - The United Fire Department shall provide food at the scene of an extended incident when units are engaged for three or more hours. A cup of soup, broth, or stew is highly recommended because it is digested much faster than sandwiches and fast food products. In addition, foods such as apples, oranges, bananas provide supplemental forms of energy replacement. Fatty and/or salty foods should be avoided.

C. Rest - The "*two air bottle rule*," or 40 minutes of work time, is recommended as an acceptable level prior to mandatory rehabilitation. Members shall re-hydrate (at least eight ounces) while SCBA cylinders are being changed. Firefighters having worked for two full 30-minute rated bottles, or 40 minutes, shall be immediately placed in the Rehabilitation Area for rest and evaluation. In all cases, the objective evaluation of a firefighter's fatigue shall be the criteria for rehabilitation time. *The Rehabilitation Officer shall determine rest time of each firefighter. Total rest time will be dependent on the firefighter's current condition.* Firefighters released from the Rehabilitation Area, shall be available in the Staging Area to ensure that fatigued members are not required to return to duty before they are rested, evaluated, and released by the Rehabilitation Officer or designee.

D. Recovery. - Firefighters in the Rehabilitation Area should maintain a high level of hydration. Firefighters should not be moved from a hot environment directly into an air conditioned area because the body's cooling system can shut down in response to the external cooling. An air-conditioned environment is acceptable after a cool-down period at ambient temperature with sufficient air movement.

E. Medical Evaluation. - Emergency Medical Services (EMS) should be provided and staffed by the most highly trained and qualified EMS personnel on the scene (at a minimum of 1st Responder level). They shall evaluate vital signs, examine firefighters, and make proper disposition (return to duty, continued rehabilitation, or medical treatment and transport to medical facility). Continued rehabilitation should consist of additional monitoring of vital signs, providing rest, and providing fluids for re-hydration. Medical treatment for firefighters, whose signs and/or symptoms indicate potential problems, should be provided in accordance with Baldwin EMS medical control procedures. *EMS personnel shall be assertive in an effort to find potential medical problems early.* **Firefighters shall not leave the Rehabilitation Area until authorized to do so by the Rehabilitation Officer.**

Heart Rate and Temperature - The heart rate should be measured for 30 seconds as early as possible in the rest period. If a firefighter's heart rate exceeds 140 beats per minute, an oral temperature should be taken. If the firefighter's temperature exceeds 100.6°F, he/she should not be permitted to wear protective equipment. If it is below 100.6°F and the heart rate remains above 120 beats per minute after 5 minutes of rest, rehabilitation time should be increased. If the heart rate is less than 120 beats per minute, the chance of heat stress is negligible. (3) Documentation - All medical evaluations and documentation shall be recorded on the Baldwin EMS Firefighter rehab log. This documentation includes:

I. Firefighter's name & department,
II. Time into rehab area,
III. Vital signs,
IV. Treatment/comments,
V. Time out of rehab area and
VI. Initials of releasing Rehabilitation Officer or his/her designee.

This protocol references FEMA Publications.

Federal Emergency Management Agency
US Fire Administration Publication FA-114; 6/92

See Rehab Log in forms section
END

Back to Index ↑

Responding to Fires

Baldwin EMS will respond to all fire calls within our response area. The designated ambulance will be the primary response ambulance to all fire calls with flames and possibility or unknown injury. Turnout gear is worn to all fires.

Responding to fires:

1. If there are known patients, two crews will respond immediately. One for patient care, one for firefighter safety.
2. Go enroute emergency to the scene if patients are known/unknown/or flames visible. However, unless a known victim exists, stay out of the way of responding fire units.
3. Only the medic QRV responds to alarms (listen to page). If non-working fire (no flames/alarms/grass fires) the ambulance crew shall respond non emergent to the scene.
4. Upon arrival at a fire scene, the driver must position the ambulance to allow for rapid egress, yet not impede incoming fire vehicles. The fire incident commander may request the ambulance be moved to another location. However, the ambulance crew must remain within reasonable distance from the ambulance should a medical emergency occur while at a fire scene. An ambulance crew may need to remove equipment from the ambulance at a fire scene in order to provide care.

Medical command is responsible for:

1. Monitoring communications by portable radio when out of the truck, setting up and running rehab area, and all other EMS functions on scene.

An ambulance crew that is assigned to a fire call is dedicated to that call until released by the fire incident commander. Any other calls must be handled by back-up crews or per mutual aid contracts.

The on scene crew is responsible for fire fighter safety and rehab. Should the public need assistance, the on scene crew may begin treatment, but should page a backup crew for transportation and transfer care.

Fire calls where we simply stand by for the fire fighters are billed separately. Your duty would be to complete a standby report with demographics, times, dates, and a narrative stating fire standby only, no treatment. If a firefighter is treated with no transport, indicate supplies used. If treated and transported, complete a full report.

If you treat a patient from a house fire, car fire, etc., a run report with appropriate insurance information should be completed as we normally do, transport or scene care only.

END

Back to Index ↑

Responding to Possible Terrorist Activity

When dispatched to a scene that may involve possible terrorism (biological or nuclear weapons, &/or guns and explosives), treat the scene as extremely dangerous and stay away until you can determine that both a route to the scene and the scene itself is safe. Follow the steps below:

1. Immediately contact the appropriate dispatch center via radio or phone for an update. Try to gain as much information as possible prior to going enroute. Recognition and knowledge of a terroristic act is the key to survival.
2. Assess the vulnerability of the normal route to the location. Attempt to find alternate routes to the scene, as normal routes may be sabotaged. Also, find all emergency exit routes from the location you are going to in the event that immediate evacuation of EMS personnel is needed. EMS personnel may be targets for terrorism as well.
3. Be aware of diversionary devices that may be in place in areas other than the scene. These are done to deplete resources and divert them away from the terroristic incident.
4. Dispatch should relay law enforcement instructions prior to arriving on scene or at staging area.

Once on scene, the crew(s) should attempt to identify the scene and recognize the danger.

1. Conditions present
2. Target(s)
3. Hazard and/or threat present
4. Topography of the scene. Does it play for or against your crew?
5. Weather situation
6. Make an emergency exit plan for the scene

Personal and scene safety is number one priority. Avoid tunnel vision. If the crew(s) feels the situation is not right, withdraw from the scene as a department to rethink the situation. Patients may die in this type of situation but the crew(s) must find a way to maximize gains of patients without the loss or injury of crew members.

Call for additional help as needed. Follow Mutual Aid Protocol as it pertains to the situation.

Advise the local hospital(s) of the current situation and what to possibly expect.

Assist in the setup of Incident Command Structure. Realize this should be in the range of 700-2000' away from the scene and capable of expanding and or moving.

Setup triage and assist with decontamination area(s) as needed. Note: triage area(s) should be immediately after the decontamination area(s).

Setup staging for EMS and transport patients as needed.

Follow the directions of the Duty Officer or the highest-ranking emergency official on the scene.

END

Back to Index ↑

Mutual Aid

Baldwin Area EMS Requesting Mutual Aid from Other Agencies

There are times when ambulances from outside the Baldwin EMS Department coverage area are needed:

1. All Baldwin ambulances are used and additional ambulances are needed at that same scene
2. All Baldwin Area EMS Department ambulances are already on separate calls or out of service
3. Baldwin Area EMS Department staffing is limited

Dispatch must be notified when mutual aid is desired. The Duty Officer must specify the name of the ambulance service desired. Typically, the nearest ambulance service is preferred. However, others may be requested based on resources available and required levels of training.

If all available Baldwin Area EMS Department ambulances are either on ambulance calls or out of service, a New Richmond, Ellsworth, River Falls, Hudson, Spring Valley, or Glenwood City ambulance may be requested to respond into the Baldwin Area EMS Department coverage area to stand-by for other calls or response to the scene to free up one of our crews. The Duty Officer must specify to Dispatch where the ambulance should stage or respond. Generally, if the out-of service time for Baldwin is anticipated to be more than thirty minutes, the mutual aid ambulance should stage at the Baldwin Area EMS Department station.

In mass-casualty situations or more-complex situations beyond those described above, it is the responsibility of the Duty Officer on a run to determine which additional ambulance services are needed based on closest department and their staffing and runs at the time needed.

The Duty Officer shall thank and release the assisting units as soon as possible.

Baldwin EMS Responding Outside the Normal Service Area

Any time Baldwin EMS is requested by another service to respond out of our service area to assist them at a scene or stage at their station to cover their service area we intend to respond based on the following guidelines:

Mutual aid requests for Baldwin Area EMS will be filled based on available resources and personnel. Our primary goal is to ensure adequate emergency medical service coverage to our own public service area (PSA).

The Duty Officer shall establish a Paramedic level on call crew for our PSA first. Mutual aid calls get the next highest level crew available, pending any Interfacility transfers known by the Duty Officer.

Crew shall respond to the station. Duty Officer shall handle communications with dispatch and other services until a crew is established and enroute.

Our crews shall return as soon as released by requesting agency.

END

Back to Index ↑

Helicopters/Air Medical

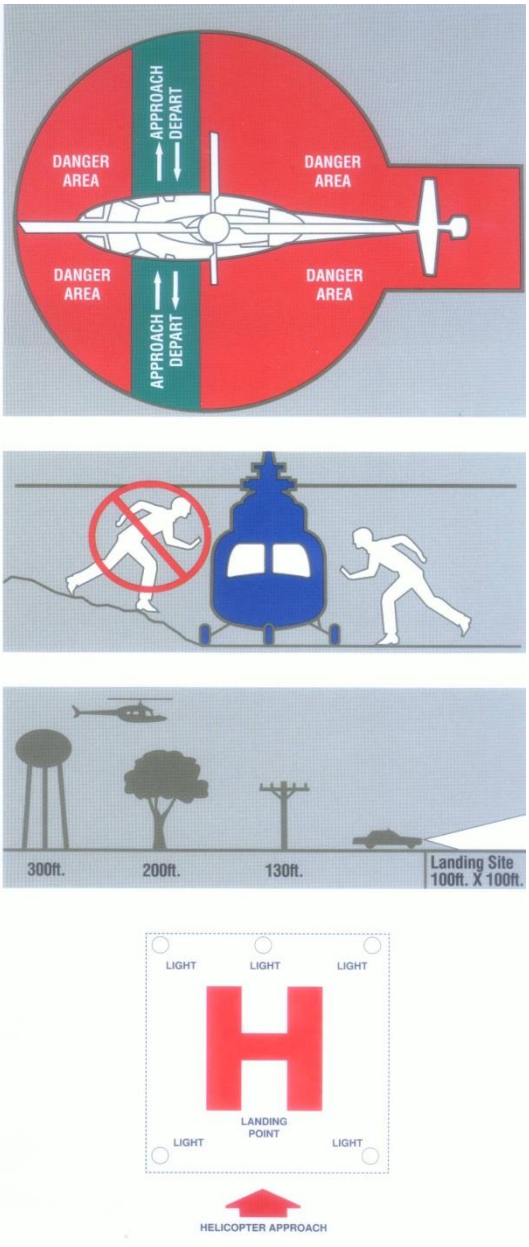
Requests for helicopters are made through Dispatch by the Duty Officer when sufficient information has been observed to warrant the use of air medical. The determination is based on resources/staffing, traffic, weather, number of patients, etc.

When requesting a helicopter the following information must be given to Dispatch:

1. Specific helicopter company requested: LifeLink, Mayo, or North.
2. Type of response: Response to scene or BAMC. BAMC must be notified as soon as possible if a helicopter is en route to its helipad. Landing pad is safer than most scene landings.

The fire department should be deployed for setting up scene landing zones.

Helicopter Safety and Landing Guide



General Landing Zone Guidelines

- Landing areas should be 100' in diameter, with approach and departure paths clear of wires, trees, antennas, and loose debris.
- Landing surface should be flat and clear of people, vehicles, brush, etc.
- Landing directions should be into the wind.

General Safety Guidelines

- **Approach the helicopter only when escorted by a crewmember.**
- Approach and depart the helicopter from the sides only, within view of the pilot. Never approach the helicopter from the tail or the slope.
- Carry equipment in a crouched position.
- Smoking is not permitted in or around any LZ.

Protection of Personnel

- Remain clear of the landing area (approximately 200 feet) during landing and takeoff.
- Secure all loose equipment and shield patients from blowing debris.
- Be aware of flying debris and use eye and hearing protection.

Night Operations

- Mark off four corners of the LZ with lights; place a fifth light on the side of the LZ from which the wind is blowing.
- Searchlights can be used to illuminate hazards such as power poles, high trees, or wires.
- DO NOT use flares to mark the LZ.
- Keep high beam headlights off. Do not point searchlights, flashlights, or spotlights at the helicopter. Bright lights directed at the helicopter can temporarily blind the pilot. Strobe lights, if used, should be turned off after the pilot has identified the LZ.

PURPOSE
This policy is intended to assist EMS personnel during a large gathering of people for a specific purpose in deciding whether to treat a patient on scene or to encourage transportation of the patient by an ambulance or private vehicle to a medical facility for further evaluation.

Sporting Events
The Baldwin EMS Department is contracted for events such as football, hockey and other sports events by the schools. We do so at minimal cost for school and non-profit organizations.

Community Events
We often support other community events such as Baldwin Booster Days, Hammond Heartland Days, and the St. Croix County Fair. Health fairs and other events are used for Public Relations and EMT recruitment. Most events require a licensed EMS crew. We will provide the highest-level crew possible for these events.

EMT's are encouraged to sign-up for sporting and community events whenever possible.

SPECIAL NOTES
1. Establish contact with the athletic directors, coaches, and/or trainers of every team to advise them you are on scene.
    a. Establish how they plan notify you for help if needed.
    b. Advise them what you are capable of doing on scene and ask what their expectations are of the crew.
2. Public Relations or other public standby event:
    a. Establish contact with the event organizer.
    b. Establish communications and determine how they will notify you for help if needed.
3. If this is a health fair or event where we take blood pressures, blood glucose, and so on, set up in an area that provides the community an opportunity to tour our ambulance and ask questions.
4. Document all patients treated and released at any event on the treatment form.
5. Complete a refusal form for any patient that EMS feels should be treated further, but the patient refuses.
6. All minors refusing treatment and/or transport against EMS advice must be cleared and released to a parent, guardian or a responsible competent adult.
7. Assure that Baldwin EMS vehicles are parked in safe and supervised locations and quick egress routes are available at all times. You must be available to respond to other off-site emergencies.

PROCEDURE FOR TRANSPORT OR NON TRANSPORT
1. Provide basic first aid for free and release patient if he/she does not want further care or transport for: Minor abrasions and lacerations, Contusions, Sprains or strains. Provide non transport sheet.
2. Provide screening exam for questionable patients to rule out a serious medical problem: Take vital signs and record, Complete a detailed patient assessment and PCR.
3. Any patient that does not fall within the criteria of the categories above should be transported.
4. Some patients that require transport to a medical facility include: Head/spinal injuries, Chest pain, Asthma attacks/shortness of breath, large lacerations, Anaphylaxis, Diabetics complications. Treat and transport. Any drug or alcohol overdoses. Law enforcement should also become involved.

Consult with medical control for any questions relating to patient care or transportation.
END

Back to Index ↑

Family Members Ride along in Ambulance

PURPOSE
All EMS calls should be regarded as true emergencies, with patient care being the single most important factor. **Family members riding to the hospital in the module of the ambulance is discouraged** because they tend to place the medical staff in a position of sharing attention with the patient. These distractions of assuring family members of the patient's condition injuries and treatment given can present a significant problem to the EMS caregiver. **Attentiveness toward the patient's chief complaint, injuries, vital signs, stabilization and psychological support can be critically compromised by these distractions**.

It is recognized, however, that occasionally there will be exceptional cases in which the EMS crew may decide that it is necessary to have a family member accompany them in the ambulance. In such cases, the following guidelines should be used:

1. Requests by family of the patient to accompany them to the hospital are left to the discretion of the crew. Only **one** family member may be allowed to ride in front seat. Seat belts must be used.

2. They may ride in the driver's compartment of the unit unless the patient is a minor and the parent has a calming effect on the child.

3. The emotional state of the passenger should be such that it will not interfere with the treatment of the patient.

4. Under no circumstance shall a crew allow a family member to ride along that has consumed alcohol, or is otherwise impaired.

The only exception to the above guidelines is if the patient is a child and both parents request to accompany him/her. In this case, one parent may ride in the treatment compartment (exact location is at the discretion of the lead EMT) and the other in the driver's compartment.

The rider's name and relationship to the patient should be documented in writing on the run form.

The crew shall encourage other means of transport by advising the requestor that our focus must be on the patient. The receiving hospital normally will guide the family away any how until the person is stabilized. And riding home later should be a consideration. The duty officer or local hospital can assist the family with maps so the process doesn't slow the transport.

END

Back to Index ↑

Suspected Child and Elderly Abuse

Indications: Child /Elderly abuse, which includes sexual abuse and neglect, is a common cause of trauma. Medical illnesses are often left untreated and exacerbated by abuse and neglect in both children and the elderly. Abuse can consist of psychological methods by perpetrators as well. Deprivation of nutritional, environmental or medical needs is very common in neglect cases. Over a million cases a year are reported.
Guideline for Management:

1. **Providers Responsibilities**: Observation, transport and reporting are the key responsibilities of providers. In addition to observing standard patient care protocols, providers should:
    A. Objectively and accurately record the history of the patient's injuries as given by the parent(s) or caregiver. Do not accuse or confront parent(s) or the caregiver.
    B. Treat and transport the patient according to guidelines.
    C. Report suspicions to the Emergency Department Staff and Law-Enforcement.

Back to Index ↑

Responding to Influenza Calls

The purpose of this guide is to provide Baldwin Area EMS with medical control with guidance during the influenza season (or outbreak) to limit possibility of staff exposure.

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
Fever, Chills Cough, Sore throat, Runny or stuffy nose, Body aches, Headache, Fatigue, Diarrhea and vomiting.	PMH/Meds/Allergies, Onset, Vitals, temperature.

9-1-1 Public Safety Answering Points (PSAP)

During outbreaks St. Croix County Dispatch will question callers to ascertain if there is anyone at the incident location who is possibly afflicted by influenza A (H1N1) virus, to communicate the possible risk to EMS personnel prior to arrival.

PRECAUTIONS:

1. Limit the number of providers exposed to the patient and environment and limit the time of exposure. One medic assess the patient, other providers come in only for purpose of moving the patient or as necessary for treatment. If no acute febrile respiratory illness, proceed with normal EMS care.
2. If symptoms exist, follow droplet precautions and don PPE for suspected cases of flu prior to coming within 6 feet from patient. Which includes:
    A. N95 Respirator mask, properly fit to EMS personnel,
    B. Safety glasses with side shields or goggles,
    C. Medical gloves,
    D. Place a standard surgical mask on the patient, if tolerated. If not tolerated, EMS personnel may wear a standard surgical mask.
3. All EMS personnel during aerosol generating activities (e.g. endotracheal intubation, nebulizer treatment, and resuscitation involving emergency intubation or cardiac pulmonary resuscitation) should wear a fit-tested disposable N95 respirator, disposable non-sterile gloves, eye protection (e.g., goggles; eye shields), and gown, unless EMS personnel are able to rule out acute febrile respiratory illness or travel to an endemic area in the patient being treated.
4. Following contact with a patient with flu-like symptoms, EMS personnel shall properly clean or dispose of material that have come in contact with patient.

All equipment used for the evaluation of the patient shall be properly cleaned or disposed. Cleaning Ambulances and Quick-Response Vehicles after Treating or Transporting an Influenza Patient:

1. Routine cleaning with soap or detergent and water to remove soil and organic matter, followed by the proper use of disinfectants.

2. After the patient has been removed and prior to cleaning, the air within the vehicle may be exhausted by opening the doors and windows of the vehicle while the ventilation system is running. This should be done outdoors and away from pedestrian traffic.
3. Routine cleaning methods should be employed throughout the vehicle and on non-disposable equipment while wearing appropriate PPE.

EMS Transfer of Patient Care to a Healthcare Facility

1. When transporting a patient with symptoms of acute febrile respiratory illness, EMS personnel should notify the receiving healthcare facility so that appropriate infection control precautions may be taken prior to patient arrival.
2. Patients with acute febrile respiratory illness should wear a surgical mask, if tolerated. Small facemasks are available that can be worn by children, but it may be problematic for children to wear them correctly and consistently. Moreover, no facemasks (or respirators) have been cleared by the FDA specifically for use by children.

END

Back to Index ↑

Patient Care

Guidelines

Patient Assessment

Must be performed for every patient. The most highly trained provider on scene or in a crew shall be in charge of patient care. Attendance of the patient during transport will be appropriate to the acuity of patient. EMS personnel qualified and certified by the Medical Director to provide the appropriate level of care will attend all transports. The only exceptions may occur during mass casualty incidents (MCI), search and rescue or other special operational circumstances. **Inappropriate assignment of EMS personnel will be grounds for suspension / termination.**

BLS/ALS

1. **Initial Assessment:** Scene size up: # patients? Additional resources? Scene safe? Spinal precautions? Rescuer safety.
   - A. Level of conscious: alert, responds to voice, to pain, unresponsive (AVPU).
   - B. Airway: assess for patency, and partial or complete obstruction.
   - C. Breathing: assess rate, depth, chest rise, equality.
   - D. Circulation: assess pulses (rate, regularity, and quality), skin color, capillary refill, obvious bleeding.
   - E. Disability: pupils, posturing, seizures, Glasgow Coma Scale.
   - F. Expose: as indicated to look for life threatening injuries/conditions.
   - G. Vitals: blood pressure, pulse, respirations, skin/body temp, oximetry.
2. **Focused Assessment:** assess areas for pain, tenderness, swelling, bruising, deformity, wounds, and:
   - A. Head: blood/fluid from ears, nose, mouth or eyes, pupils.
   - B. Neck: jugular vein distention, step-offs, tracheal position, subcutaneous air.

C. Chest: crepitus, lung sounds, subcutaneous air, paradoxical movement.
D. Abdomen: rigidity, guarding, rebound tenderness, distention.
E. Pelvis/Genitals: stability, crepitus, priapism, bleeding.
F. Extremities: CMS, grip and foot strength, range of motion, pulse equality, edema.
G. Back: edema, pain, and bruising.

3. Mechanism of injury:
A. For MVAs: speed, vehicle damage/intrusion, type of accident, use of seatbelts, airbag deployment.
B. GSWs/stabbings/assaults: type and/or caliber of weapon, length of knife.
C. Falls: height, surface landed on. Sports: helmet or safety equipment worn.
D. Potential for head/spinal trauma, loss of consciousness, use of mind altering substances?

4. Mechanism of illness:
A. When did symptoms begin? Has it changed? Does anything make the symptoms better or worse?
B. Any previous similar episodes?
C. Loss of consciousness/potential for associated trauma and need to take spinal precautions?
D. What do the symptoms feel like? (Quality, radiation, severity).
E. Use of mind altering substances.

5. Past Medical History:
A. Medical conditions/surgeries.
B. Medications: dosages, when last taken (bring medications to hospital).
C. Allergies: medications (also foods, animals, and other as appropriate).

6. Reassessment:
A. Repeat vital minimally every 5-10 minutes. Every five minutes if unstable or abnormal.
B. After procedure/medication administration. Repeat assessment any time patient condition deteriorates.

7. **ALS Assessment:** (Electronic Medical Records)
A. Evaluation of ABCs, Assessing for the need of an advanced airway, auscultation of lung sounds.
B. Assessing for the need of an IV/IO. Assessing the need for pain medication.
C. Assessing for the need of a cardiac monitor
D. Assuring that BLS skills have been completed.

END

Back to Index ↑

Transfer of Care at the Medical Facility

1. EMS providers will continue any and all pre-hospital care initiated during the transport until the patient has been triaged in the ED by a RN or Physician and a verbal report has been given.
2. Transfer of care includes movement of the patient to the hospital- owned equipment, i.e. bed, stretcher, waiting room etc.
3. Transfer of care will be document by the EMS provider who will submit a completed Medical Patient Care Report (WI approved run sheet or computer generated PCR) to hospital triaging personnel.

ALS Provider Transfer of Care to a BLS provider

1. Patients must be stable with complaints that would be cared for at the BLS level. Prior to transferring care to the BLS provider, the examining paramedic will reasonably determine **that there are no anticipated changes in the patient's present condition** that would deem the patient unstable. No patient will be turned over once ALS or advanced scope interventions have been initiated. Transfer of care can take place if:
    a. Patient care can be transferred if the 12 lead is normal sinus.
    b. Except during declared MCI's or when no other ALS transport alternative exists, patients meeting trauma criteria will be considered ALS patients and treated accordingly.
    c. The patient has a patent airway, maintained without assistance or adjuncts.
    d. The patient is hemodynamically stable. Vital signs should be steady and commensurate

with the patient's condition.

e. The patient is at his or her baseline mental status and not impaired as a result of medications or drug ingestion.
f. No mechanism or injury warrants a trauma alert or activation.
g. No cardiac, respiratory, or neurological complaints that warrant ALS intervention.
h. The ALS provider provides the BLS provider with a full patient report to include vital signs and physical assessment.

Air Embolism

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. Bloody froth from the nose and mouth 2. Muscles, joints and chest. 3. Dizziness and convulsions. 4. Blurred vision. 5. Slurred speech. 6. Patients also can develop a pneumothorax.	1. PMH/Meds/Allergies. 2. Nature of current illness/trauma.

OVERVIEW: Air embolism can occur whenever the pressure exerted on the body by its environment is rapidly reduced. It usually is associated with SCUBA or deep-water diving, but can involve rapid decompression of an aircraft. The alveoli in the lungs are ruptured, causing air bubbles in the blood circulatory system. These bubbles can go through the carotid arteries into the brain.

PRE-HOSPITAL GOAL: Establish and maintain an airway, assess for trauma, administer 100 percent oxygen, obtain an accurate history and transport promptly. Transport immediately to HCMC hyperbaric chamber.

EMERGENCY MEDICAL RESPONDER AND EMT CARE *If trained and authorized.*

1. Assess airway (place adjunct as necessary)
2. Assess breathing (administer oxygen as necessary)
3. Assess circulation.
4. Assess disability.

5. Place patient on cardiac monitor, 12-lead when possible.
6. Refer to cardiac arrest protocol as indicated.
7. Transport patient in left lateral recumbent position or Trendelenburg position.
8. Reassess vital signs as indicated.

ADVANCED EMT/INTERMEDIATE CARE *If trained and authorized. In addition to above*

1. Establish IV of NS at KVO rate.

PARAMEDIC /CCTP/R.N. CARE *If trained and authorized In addition to above*

1. Consider advanced airway protocols if other methods unsuccessful.
2. Treat for pain, nausea, anxiety as needed.
3. Refer to ACLS protocols for management of cardiac arrest patient as indicated.

END

Back to Index ↑

Airway Obstruction

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. Choking 2. Cough 3. Voice changes/inability to speak 4. Skin: cyanosis 5. Neuro: LOC , seizures, or unconscious 6. Respirations: labored, paradoxical, tachypneic, inspiratory stridor. Breath sounds, O2 sats	1. Foreign body aspiration 2. Food ingestion 3. Drug or alcohol use 4. Trauma 5. PMH/Meds/Allergies

EMERGENCY MEDICAL RESPONDER AND EMT CARE *If trained and authorized.*

1. Assess and support ABCs.
2. Use suction if necessary to clear airway.
3. If airway remains obstructed, follow AHA guidelines for the removal of obstruction:
   a. Adult: administer abdominal thrusts until dislodged or patient becomes unconscious. Once unconscious begin CPR, only preform a finger sweep if the object is visible.
   b. Child: administer abdominal thrusts until dislodged or patient becomes unconscious. Once unconscious begin CPR, only preform a finger sweep if the object is visible.
   c. Infant: administer five back blows and five chest thrusts until dislodged or patient becomes unconscious. Once unconscious begin CPR, only preform a finger sweep if the object is visible.
4. Assist ABCs as necessary, administer high flow oxygen and perform ECG monitoring once airway is cleared.

5. (EMT only) If airway remains obstructed, use Magill forceps and laryngoscope to attempt to remove obstruction. If airway remains obstructed, continue efforts during rapid transport to closest medical facility.

ADVANCED EMT CARE *If trained and authorized. In addition to above*

1. Once airway is cleared, establish IV of NS TKO.
2. If unable to clear airway, consider an advanced airway (CombiTube)

INTERMEDIATE CARE If *trained and authorized. In addition to above*

1. Monitor ECG for abnormalities.
2. Be prepared to intubate patient if spontaneous breathing does not return.

PARAMEDIC /CCTP/R.N. CARE *If trained and authorized In addition to above*

1. Consider needle cricothyrotomy if above techniques fail.

SPECIAL NOTES:

1. Suction applied for > 10 seconds may cause hypoxia and dysrhythmias.
2. Be prepared for vomiting following removal of obstruction.
3. Do not intervene in patients with a partial airway obstruction with good air exchange

END

Back to Index ↑

Altered Level of Consciousness

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. GCS < 15; abnormal behavior, such as combativeness, irritability, confusion, agitation or coma.	**1.** Scene factors: needles, pills, suicide notes, etc.
2. Traumatic injuries	**2.** Recent injury or illness
3. Pupils: dilated, constricted, [1], sluggish	**3.** Substance abuse
4. Seizures; incontinence	**4.** Toxic exposure
5. Hypothermia, hyperthermia	**5.** Onset and duration
6. Snoring respirations	**6.** Medic alert tags
7. Irregular/unstable vital signs; arrhythmias	**7.** PMH (esp. seizures, diabetes, CVA)/Meds/Allergies

PRECAUTIONS:

1. An altered or decreased LOC masks the signs of injury and illness. Any patient that is unconscious or has an altered mental status has the potential for occult trauma and/or spinal injury.

EMERGENCY MEDICAL RESPONDER CARE *If trained and authorized.*

1. Take spinal precautions if conditions are appropriate while assessing and supporting ABCs.
2. Consider oral or nasal airway initially if GCS < 9.
3. Assist ventilations on any patient with decreased LOC and respirations < 10 or > 30.
4. Administer 100% oxygen.

EMT CARE *If trained and authorized. In addition to above*

1. Consider ALS response.

2. Perform blood glucose testing. If BS is < 70 follow hypoglycemia guideline.
3. Backboard patient with C-collar if patient complains of head, neck, or back pain, or if suggested by mechanism of injury, or if history is unreliable due to unconsciousness or altered mental status.
4. Check patient temperature.
5. Immediately transport any patient with significant airway, breathing, circulatory, or neurological compromise.

INTERMEDIATE CARE *If trained and authorized. In addition to above*

1. EMT with IV training-establish IV of NS TKO. Consider fluid challenges in any adult patient with systolic BP < 90.
2. Give a 500 cc fluid challenge for presumed medical causes.
3. Consider Naloxone if narcotic overdose/toxicity is suspected and respiratory status is compromised.
4. Initiate cardiac monitoring. Perform 12-lead EKG if cardiac etiology is suspected.

PARAMEDIC /CCTP/R.N. CARE *If trained and authorized In addition to above*

1. Maintain adequate airway and ventilations in any patient with a GCS < 9. RSI services should follow the RSI guideline if GCS < 9.
2. Refer to the Metro Area Hospital Specialty Designations policy for appropriate destination hospital in patients with suspected CO poisoning, traumatic injury, or stroke.

END

Back to Index ↑

Anaphylaxis/Allergic Reactions

SIGNS & SYMPTOMS:	**OBTAIN HISTORY OF:**
1. Dyspnea, tachypnea, or hyperventilation 2. Cyanosis, ↓ O_2 sats, agitation or anxiety 3. Hoarseness, stridor, or bronchospasm 4. Pulmonary or laryngeal edema 5. Rapid, weak pulse, ↓ BP, syncope 6. Hives, rash, itching, flushing 7. Difficulty speaking & use of accessory muscles	1. PMH/Meds (esp. Epi auto injector)/Allergies 2. Cardiorespiratory disease 3. Onset, severity, & duration 4. Relieving factors (Epi auto injector) 5. Environmental or allergen exposure

PRECAUTIONS:

1. Never administer epinephrine auto-injector devices or 1:1,000 epinephrine via IV route.

EMERGENCY MEDICAL RESPONDER CARE *If trained and authorized:*

1. Assess and support ABCs. Begin high flow supplemental oxygen via mask. Administer high concentration supplemental oxygen. Oxygen 4-6L per NC or 10-15L per NRM as appropriate.
2. Assess vital signs (BP, pulse, respirations, O_2 sats) and lung sounds frequently, especially after each medication or if unstable.
3. **Contact Medical Control prior to assisting with administration of patient-prescribed Epi auto injector.**
4. Assist respirations of patient with decreased LOC and respiratory rates of < 10 or > 30/min.

EMT CARE *If trained and authorized,* ***in addition to above:***

1. Consider albuterol neb (2.5 mg = 3 ml of 0.083% solution) if patient is wheezing.
2. **Administer Epinephrine I.M.** 1:1,000: 0.3mg. If no change, may administer a 2nd dose.

NOTE: *We use a 30 mL. multi-dose vial of Epinephrine 1:1,000, it is a single patient vial, discard the rest*

after use. Best results use a 1 cc insulin siringe.

3. **Be prepared to intubate patient with King airway.**

AEMT AND INTERMEDIATE CARE *If trained and authorized, in addition to above:*

1. Establish IV of NS TKO.
2. If systolic BP falls < 90 in adults, administer a fluid bolus and repeat vitals.
3. Monitor ECG for any abnormalities.

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

1. **Administer Benadryl** 50mg IM. Note: May consider Benadryl with or without signs of respiratory distress if pt.'s BP >90.
2. **Solu-Medrol 125 mg** IV/IO for moderate to severe reactions.
3. If unable to establish an airway and the airway is swollen, consider needle cricothyrotomy.
4. If hypotensive with signs/symptoms of shock, contact medical control to consider dopamine drip.

PEDIATRIC CONSIDERATIONS:

1. Administer initial dose of IM. 0.15 mg epi 1:1,000. May administer a second dose as needed.

SPECIAL NOTES:

1. For those patients with allergy or sensitivity to latex products, attempt to remove or minimize exposure to latex products during treatment and transport but do not withhold treatment if latex free alternatives are not available. Notify receiving hospital early if patient has latex sensitivity or allergy.
2. Higher doses (0.4 mg) of epi 1:1,000 may be considered for patients weighing 210 lbs. (95 kg) or more.

END

Back to Index ↑

Blood Products Monitoring

Indications:

1. Transporting a patient with blood or blood products being infused is indicated when the risks involved in discontinuing blood transfusion enroute are outweighed by the benefits to the patient.

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized:*

Procedure:

1. All blood products to be infused must be initiated by the transferring facility.

2. Before accepting responsibility for the patient, confirm together with a nurse or physician from the transferring facility that the name on the patient's armband is the same as the name on the unit(s) of blood which is (are) infusing.

3. Obtain a written order from the transferring nurse or physician as to the rate of infusion, the total amount to be infused during transport of the patient.

4. Vital signs, including body temperature, must be recorded prior to the transport and every ten minutes during transport, until arrival at the receiving facility.

5. If the patient develops any sign of allergy/sensitivity reaction, including; chills, fever (an increase of more than 1^0 C, or 1.8^0 F above the patient's initial temperature), chest pain, flank pain, hives, wheezing, urticaria, or the patient begins showing signs of shock; then the following actions should be initiated immediately:
   A. The infusion of blood products must be immediately stopped and the blood administration tubing removed. The tubing, the blood container, and any unused blood must be saved for delivery to the receiving facility.

B. A normal saline infusion should be initiated and fluid should be administered as indicated in the shock protocol if shock is present.
C. Anaphylactic reactions (hives, wheezing, and shock without fever) should be treated as indicated in the Anaphylaxis protocol.
D. Hemolytic reactions (fever, chills, chest pain, flank pain, and/or shock) may require a diuretic in addition to large amounts of fluid to maintain intravascular volume. Treat shock as indicated in the Shock Protocol and contact medical control for orders regarding diuretic administration in hemolytic reactions.

The written orders, or copy thereof, by the transferring physician must accompany the Patient Care Report and must be delivered to the receiving facility with the patient.

END

Back to Index ↑

Burns

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. Reddened skin that blanches with pressure 2. Blistering; edema 3. Broken epidermis; weeping surface 4. Dry, pale, white, yellow or charred skin 5. Wheezing, dyspnea, hoarseness, stridor 6. Singed facial hair, sooty sputum or phlegm 7. Burning sensation in upper airway or chest 8. Pain, tingling, hyperesthesia, soothed by cooling; 3rd degree may be painless.	1. PMH/Meds/Allergies/Oral Intake 2. Recent illness or trauma 3. Duration and concentration of exposure 4. Type of chemical or toxic exposure 5. Enclosed or open space exposure 6. Electrical contact (AC/DC, amps, volts) 7. Presence of fire, smoke, or distinctive odors

PRECAUTIONS:
1. Consider the potential for trauma and take spinal precautions in all burn cases, unless it can be ruled-out by signs and symptoms, mechanism or history. All high voltage electrical burn cases should have spinal precautions taken regardless of signs and symptoms. In most cases, traumatic injuries take priority over burn care. The exception would be burn injuries that compromise ABCs.
2. Consider the potential for inhalation injury in all victims of closed-space injury, or those who have inhaled fumes, smoke or steam. Cyanide and carbon monoxide are commonly present in fires.
3. The presence of carbon monoxide can cause pulse oximetry readings to be artificially high.
4. Internal injuries caused by electricity are usually more severe than the external wounds. Hidden injury to muscles, nerves and the CNS may exist. Vertebral fractures are frequent.
5. Do not break blisters or apply ointments (exception Hydrofluoric acid exposure).

EMERGENCY MEDICAL RESPONDER (EMR) CARE *If trained and authorized:*
1. Ensure scene is safe. Extinguish fire.
2. Remove patient from heat source.
3. Notify the Power Company for electrical injuries.

4. Administer oxygen. Remove clothing and jewelry.
5. Complete secondary survey for other trauma.
6. Elevate burned extremities.
7. Do not allow patient to become chilled.

EMERGENCY MEDICAL TECHNICIAN (EMT) CARE *If trained and authorized, in addition to above:*

1. Consider ALS response.
2. Assess burns for type, depth, total body surface area (TBSA) using either the Rule of Nines or the Rule of Palm (patient's palm is approximately 1% of their TBSA).
3. Initiate cardiac monitoring in electrical, inhalation, hydrofluoric acid, fluorine gas, and major burns, and in patients ³40 years, or those with chest pain or difficulty breathing.
4. Minor burns (< 9% TBSA) may be treated with wet dressings.
5. Cover major burns with a dry sheet. Do not use wet dressings.
6. Transport to Burn Center as appropriate.

SPECIAL BURN CONSIDERATIONS: In addition to above and as appropriate:

1. Chemical Burns:
    a. Wash with copious amounts of water or NS for at least 20 min.
    b. If eyes are involved, irrigate with copious amounts of NS until reaching the receiving hospital.
    c. Dry /powdered chemicals: brush away as much as possible before flushing with water.
    d. Carbolic acid (phenol) does not mix with water. When available, use alcohol for the initial wash of unbroken skin followed by steady water flush.
2. Inhalation burns:
    a. BLS with medication training: Consider Albuterol neb for bronchospasm.
3. Tar burns:
    a. Cool with water until burning is stopped.
    b. DO NOT attempt to remove tar from skin.
4. Hydrofluoric Acid/Fluorine gas:
    a. Refer to Hydrofluoric Acid/Fluorine Gas Exposure guideline.

ADVANCED EMT CARE *If trained and authorized, in addition to above:*

1. EMT with IV training- for major burns (³ 9% TBSA) establish IV/IO of NS:
    a. < 5 years: initial bolus 20 cc/kg but do not delay transport
    b. 5 - 15 years: run @ 250 cc/hr.
    c. > 15 years: run @ 500 cc/hr.
2. An IO or IV line of NS should be established in critical patients.

SPECIAL BURN CONSIDERATIONS: In addition to above and as appropriate:

1. Inhalation burns:
    a. Consider Albuterol/Atrovent neb for bronchospasm

INTERMEDIATE/ PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

Refer to pain management guideline for appropriate medications and dosing.

SPECIAL BURN CONSIDERATIONS: In addition to above and as appropriate:

1. Inhalation burns:
    a. Reassess frequently and consider the need for early intubation.
    b. RSI as appropriate.

END

Back to Index ↑

Chest Pain and "ST" Elevated Myocardial Infarction "STEMI"

This guideline applies to adult patients with non-traumatic chest pain that is suspected cardiac in etiology. The overall goal is to provide therapy in an effort to reduce ischemia, provide pain relief and rapidly identify and treat a patient suffering from a suspected cardiac event.

EMERGENCY MEDICAL RESPONDER (EMR) CARE *If trained and authorized:*

1. Perform an accurate patient assessment.
2. Administer supplemental **Oxygen** maintaining a SpO_2 >96%. In chest pain patients, administer **Oxygen** by nasal cannula at 2-4 lpm or via a non-rebreather mask at 10-15 lmp to maintain 96%.
3. Place the patient in a position of comfort and obtain a complete set of vital signs including 12 lead.
4. BLS providers should assist patients in taking **Aspirin 324 mg** PO (chewed and swallowed) if not taken during the previous 24 hours or has a known allergy.
5. BLS providers should assist patients in taking their own previously prescribed **Nitroglycerin** provided that the patient's systolic blood pressure is ≥110 mmHg.

ADVANCED EMT CARE *If trained and authorized, in addition to above:*

1. Establish 2 **IV's** of Normal Saline KVO or Saline Lock.
2. Obtain a 12-lead EKG if not already completed.
    a. Once IV is established providers should assist patients in taking One **Nitroglycerin tablet** provided that the patient's systolic blood pressure is ≥110 mmHg, every 5 minutes.
    b. **Caution:** Withhold Nitroglycerin if Patient had erectile dysfunction medication within 24 hours (Viagra or Levitra) or within 48 hours for using Cialis.

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in **addition to above:***

1. Provide **continuous EKG monitoring**. Treat life threatening dysrhythmias as indicated.
2. Administer **Normal Saline Boluses of 250 ml** as needed to maintain a systolic blood pressure of ≥100 mm/Hg in cases of cardiogenic shock with or without right ventricular involvement (RVI) to a total of 2000 ml. Continuously assess lung sounds.
3. If pain persists after 2 SL doses apply **Nitroglycerin paste** to chest per guideline. Ensure that the systolic blood pressure is ≥110 mmHg prior to application.
4. Administer **Morphine Sulfate 4 mg IV**, up to a maximum of 10 mg for chest pain not relieved by Nitroglycerin that is likely of cardiac etiology.

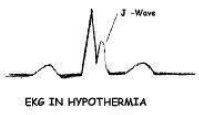
a. **Midazolam (Versed) 2-5 mg IV/IN**, up to a maximum single dose of 5 mg in lieu of Morphine Sulfate, if chest pain is suspected due to CNS stimulants (cocaine, methamphetamine, etc.).

6. **Ondansetron (Zofran) 4mg IV** for nausea /vomiting .
7. Consult BAMC Physician for instructions of non STEMI patients.
8. **If 12-Lead ECG shows a STEMI**, two or more boxes in two or more contiguous leads:
   a. Patients with a STEMI should be transported directly to a facility capable of percutaneous interventions (PCI) - Contact receiving facility: **Activate the BAT phone for United Hospital**.
   b. If they are unable to accept the patient call MRCC for activation of Regions or St. Joe's Hospital.
9. **For STEMI, In addition to chest pain guideline above:**
   a. Administer Heparin 60 units/kg to a maximum dose of 4000 units slow IVP
   b. Administer Ticagrelor (Brilinta) 180 mg p.o.

   CONTRAINDICATIONS (to Heparin or Brilinta™) treatment:
   1. Active pathologic bleeding: Peptic ulcer, Hx GI bleed, intracranial hemorrhage, Trauma.
   2. Severe hypertension or renal disease.
   3. Hypersensitivity to drug (Known Heparin induced thrombocytopenia).

END

Cardiac Arrest - Adult

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. Absent pulse (carotid and one other location) 2. Absent or agonal breathing 2. Skin: pale, cool, cyanotic, mottled 3. Neuro: unconscious, seizure activity (initially) 4. J (Osborn) ECG wave in hypothermia  EKG IN HYPOTHERMIA	1. DNR Status. 5 . Witnessed or un-witnessed event. 6. Down time. 7. Bystander CPR. 8. PMH/Meds/Allergies. 9. Potential causes: MI, CVA, OD, electrocution, diabetes, airway obstruction, trauma.

PRECAUTIONS:

1. Pulse oximetry and end-tidal CO_2 monitoring in low perfusion states may be unreliable.
2. Remove medication patches prior to defibrillation.
3. Place defibrillation patches 2" away from ICD/pacemaker.

EMERGENCY MEDICAL RESPONDER (EMR) CARE *If trained and authorized:*

NONTRAUMATIC BLS CARDIAC ARREST CARE:

1. Check for a pulse for 10 seconds at the carotid artery.
2. If no pulse, perform manual or *automated chest compressions* (compression rate at least 100/min; 30 compressions: 2 ventilations). Apply the *ResQPOD* to the facemask and maintain a tight facemask seal during compressions. Ensure full recoil of the chest wall.
3. Direct a second rescuer to prepare the AED. Apply defibrillation patches per manufacturer recommendation with CPR in progress:
   A. One patch and cable to upper right chest, below collarbone.
   B. One patch and cable to mid-axillary area below left breast.
4. Allow the AED to analyze the cardiac rhythm with CPR stopped and all personnel clear of the patient.
5. If a shockable rhythm is detected, the AED will begin charging. Assure that all personnel are still clear. Deliver shock. If no shock indicated, check pulse and resume CPR if no pulse is detected.

6. After shock is delivered or if not indicated by AED, immediately begin 2 minutes (5 cycles) of CPR. While compressions are ongoing:
    A. Perform a head tilt chin lift or jaw thrust.
    B. Place an oral airway.
    C. Ventilate with 100% oxygen using a bag-valve system or demand valve. Provide 2 rescue breaths, each over 1 second following each cycle of 30 compressions.
    D. Consider placement of a *supraglottic airway* such as a King LTS-D. Once secured, ventilate once every 6-8 seconds (when the red lights blink on the *ResQPOD*) with continuous CPR.
7. After two minutes, the AED will interrupt to analyze and repeat a shock if indicated. Immediately begin a second round of 2 minutes CPR after shock. If no shock indicated, immediately begin CPR.

TRAUMATIC CARDIAC ARREST: BLS CARE

1. If possible, request an ALS intercept but do not await ALS arrival on scene.
2. Manually stabilize neck, open airway using modified jaw thrust technique. Place an oral airway.
3. Provide manual stabilization during all procedures and until the patient is secured on a board with head blocks in place.
4. Initiate CPR with 30 compressions: 2 ventilations (rate=100 compressions per minute). DO NOT APPLY THE *RESQPOD* TO THE FACEMASK.
5. Apply AED to the patient; deliver shock if indicated.
6. While performing CPR, control major external bleeding.
7. While performing CPR, assess chest for life-threatening injuries, i.e. sucking chest wound or flail chest, and treat as appropriate. Apply C-collar and backboard. Check back for injuries.

EMERGENCY MEDICAL TECHNICIAN (EMT) CARE *If trained and authorized, in addition to above:*

NONTRAUMATIC CARDIAC ARREST: BLS CARE

1. In addition to the above: If available, request an ALS unit to the scene.
2. After 2 more minutes of CPR (total of 6 minutes), BLS services should continue to provide high quality CPR and the use of the AED, while waiting for ALS to arrive. BLS services with an *automated chest compression device* should prepare patient for transport and deliver the last shock, if indicated, just prior to leaving the scene.
3. Apply EKG for non-diagnostic purposes if available.
4. Contact medical control for further orders.
5. Patients who are transported should be secured on a backboard.
6. If the patient has a return of spontaneous circulation, discontinue the use of the *ResQPOD*. If the patient has a ROSC and remains comatose with GCS <8, initiate therapeutic hypothermia:
    A. Uncover the patient to allow for radiant cooling
    B. Place 2 chemical ice packs around the patient's head
    C. Place 1 chemical ice pack in each axilla
    D. Place 1 chemical ice pack in each groin
    E. ***Wrap all chemical ice packs in towels.
7. Transport to closest appropriate medical facility.

TRAUMATIC CARDIAC ARREST: BLS CARE

1. If unable to ventilate due to traumatic airway obstruction, transport immediately. Perform CPR during transportation.
2. While performing CPR, prepare for immediate transport. Attempt to keep scene times to five minutes.
3. Begin transport to **closest appropriate facility.**
4. Apply EKG for non-diagnostic purposes if available.

HYPOTHERMIC CARDIAC ARREST BLS CARE

1. Transport to closest appropriate facility, a Level I Trauma Center preferred if profound hypothermia is suspected.
2. Preform CPR as indicated and apply EKG for non-diagnostic purposes if available.

ADVANCED EMT CARE *If trained and authorized, in addition to above:*

NONTRAUMATIC CARDIAC ARREST:

1. Intravenous lines should be started enroute.

TRAUMATIC CARDIAC ARREST: ALS CARE

1. Establish two large bore IVs enroute and run fluids wide open.

HYPOTHERMIC CARDIAC ARREST CARE: Hypothermic cardiac arrest differs in the following ways:

1. Take 30 - 45 seconds to confirm pulselessness or profound bradycardia. Perform CPR if no pulse is felt after 30 - 45 seconds.
2. Perform all treatments and transportation as gently as possible to avoid precipitating V-fib.
3. Remove wet garments and protect against further heat loss and wind chill through the use of blankets and heated patient compartment.
2. Maintain horizontal position, avoiding rough and excessive movement.
3. Severe hypothermia is frequently preceded by other disorders (e.g. drowning, overdose or trauma). Assess for and treat these underlying conditions while simultaneously managing the hypothermia.

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

NONTRAUMATIC CARDIAC ARREST: ALS CARE

1. Apply ECG monitor
2. Identify rhythm:

A. Ventricular fibrillation/pulseless ventricular tachycardia:

1. Whether witnessed or unwitnessed, begin CPR and continue until pads are placed, defibrillate ASAP, using the manufacturer's recommendation or the maximum joules available and 1 single shock. Phillips monitors should be used with 150 joules, labeled "Adult Dose."
   a) State "CHARGING!" while doing chest compressions and pressing the CHARGE button.
   b) State "STAND CLEAR!" confirm monitor shows VF while rotating compressors, "STAND CLEAR" and deliver the shock, pushing the SHOCK button.
   c) Immediately resume CPR with a new compressor to avoid fatigue and provide high quality compressions.
   d) Interruptions in chest compressions should be limited to < 10 seconds.
2. After the above first shock, and while CPR is being done, establish IO with NS. Run wide open unless contraindicated.
   a) Check glucose level
   b) Set up ACLS medications, follow ACLS Guidelines
   c) After 2 minutes of CPR, "CHARGING!", "STAND CLEAR!" verify VF/PLUSSLESS V-TACH, "SHOCK", resume CPR with a new compressor, and give the next ACLS medication in the order above.
   d) Consider placement of a supraglottic airway at this time or defer until after the next shock.
      I. Do not interrupt chest compressions
      II. Allow gastric decompression
      III. Provide mechanism for PeTCO2 monitoring
      IV. Move ResQPod to the advanced airway and turn on timing lights for ventilations.
      V. Begin continuous chest compressions.

e] After 2 minutes of CPR, "CHARGING!", "STAND CLEAR!", verify VF/VT, "SHOCK",

continue CPR with a new compressor and give the next ACLS medication

f] Consider placement of a supraglottic airway at this time if not already in place. If the supraglottic airway fails, consider intubation.

5. After every 2 minutes of CPR, "CHARGING!", "STAND CLEAR!", verify VF/VT, "SHOCK", resume CPR with a new compressor and give the next ACLS medication in the order above.

B. Pulseless Electrical Activity (PEA) or Asystole:

1. Establish IO (preferred) or IV NS during the first 2 minutes of CPR.
2. Follow ACLS Guidelines
3. Continue CPR providing 30 compressions: 2 ventilations (rate = 100 compressions per minute). Assess core pulses during chest compressions, then assess with compressions held at the end of the 2 minute cycle. Confirm pulselessness and rhythm. Do not stop compressions for longer than 10 seconds. Resume CPR at same compression: ventilation ratio and compression rate.
4. Establish *supraglottic airway* without interrupting chest compressions. If patient is unable to be ventilated with a *supraglottic airway*, consider *endotracheal intubation*. Ventilate with 100% 0_2, move *ResQPOD* from facemask to advanced airway, and turn on the *ResQPOD* timing lights. Begin continuous chest compressions. After 2 minutes, reassess and resume CPR if appropriate.
5. Continue pattern of 2 minutes CPR followed by administration of *ACLS Drug,* CPR is resumed following a pulse and rhythm check.
6. Contact medical control for additional orders after 3 mgs *epinephrine* has been given.
7. During periods of CPR performance, review and treat the H's and T's for possible cause:
8. For transport, place patient on backboard. Immobilize head with V-block and C-collar if patient is intubated. Confirm placement and document ET tube placement after each move and before entering the hospital.
9. If the patient has a return of spontaneous circulation and remains comatose with GCS <8, initiate therapeutic hypothermia:
   a) Uncover the patient to allow for radiant cooling
   b) Place 2 chemical ice packs around the patient's head
   c) Place 1 chemical ice pack in each axilla
   d) Place 1 chemical ice pack in each groin

   *** Wrap all chemical ice packs in towels.
11. Perform 12 lead EKG if patient has ROSC.
12. Transport to closest appropriate medical facility

TRAUMATIC CARDIAC ARREST: ALS CARE (In addition to above and as appropriate):

1. Ensure an open airway and adequate ventilation using an advanced airway. If unable to use an advanced airway, insert oral/nasal (if not facial trauma) and use bag-valve-mask to ventilate.
2. Perform *surgical airway* ASAP if unable to ventilate due to traumatic airway obstruction.
3. Perform *pericardiocentesis* ASAP if cardiac tamponade is suspected and tension pneumo is suspected cause.
4. Perform bilateral needle *chest decompression* if ventilation is difficult.
5. If V-fib or V-tach, follow algorithm above, remembering that defibrillation is generally not effective until circulating volume has been restored. Do not delay scene times to defibrillate.
6. If asystole or PEA, follow algorithm above. Do not delay scene times to administer medications.
7. Attempt *pericardiocentesis* and bilateral needle *chest decompression* prior to considering discontinuation of resuscitation efforts in traumatic arrest.

HYPOTHERMIC CARDIAC ARREST: ALS CARE (In addition to above and as appropriate):

1. Administered medications can accumulate to toxic levels if used repeatedly in the severely hypothermic patient. If the patient fails to respond after one shock or first line drug therapy, subsequent defibrillations and additional medication should be avoided.
2. In the hypothermic patient that has not yet developed cardiac arrest, some physical manipulations (advanced airway intubation, pacing, etc.) have been reported to precipitate V-fib. However, when urgently indicated, such procedures should not be withheld.

SPECIAL NOTES:

1. Research has indicated that high quality CPR with early defibrillation save lives. The *ResQPOD* should be attached the BVM as soon as possible. BLS airway management with patient positioning and oral airway placement should be performed early with advanced techniques being delayed until after at least 2 rounds of CPR-pulse checks.
2. IO access is preferred over IV access in cardiac arrests
3. If, despite above treatment, the patient still does not have a pulse or is not perfusing, and in conjunction with the online medical control physician, it may be appropriate to terminate the resuscitation effort. Once resuscitative efforts have begun, they may be discontinued only after consulting a physician. Due to the relative ineffectiveness of CPR in a moving ambulance and the risk to providers, ALS resuscitation of a non-traumatic cardiac arrest should usually occur in the field in its entirety and the patient only receiving transportation in unique situations or after return of spontaneous circulation (ROSC). If the pulse is lost enroute after ROSC, continue to work the arrest enroute to the hospital.
4. BLS - If patient converts with a return of pulse then re-arrests, begin the guideline over again. Three shocks may be delivered before contacting medical control. Do not attempt rhythm interpretation unless specifically trained. Document and report AED action instead.
5. Patients who are in cardiac arrest due to or associated with carbon monoxide poisoning should be transported to the closest hospital. If the patient has a sustained return of spontaneous circulation, consider transport to Hennepin County Medical Center for Hyperbaric treatment.
6. It may be necessary to shave or dry the chest to ensure good patch contact.

END

Back to Index ↑

Cardiac Arrest - Pediatric

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. Absent pulse (brachial in infant). 2. Absent or agonal breathing. 3. Pupils: dilated, sluggish or unreactive. 4. Skin: pale, cool, cyanotic, mottled. 5. Neuro: unconscious, seizure activity (initially). 6. J (Osborn) ECG wave in hypothermia.	1. PMH/Meds/Allergies. 2. Witnessed or unwitnessed collapse. 3. DNR status. 4. Bystander CPR. 5. Down time. 6. Potential causes: accident, abuse, drowning, electrocution, FBAO, respiratory distress.

CONTRAINDICATIONS:

1. Demand valve resuscitators are contraindicated in patients < 12 years.
2. AEDs should use specific AED pediatric patches in patients < 8 years. If ALS is not immediately available and an adult AED is available, the adult AED pads may be used on a child over 1 year of age (place adult patches anterior/posterior if needed so patches don't touch).

PRECAUTIONS:

1. Pulse oximetry and end-tidal CO_2 monitoring in low perfusion states may be unreliable.
2. Any medication given on standing order is at the dose recommended by a weight based resuscitation tape and should not exceed the adult dose.
3. Remember that most arrests in children are respiratory related and adequate ventilation is the key for successful resuscitation and correction of acidosis.
4. Placement of an OG tube in intubated pediatric arrest is important to counter gastric distention.
5. Because the head of a child is proportionally larger, padding under the shoulders or torso in a child approximately 2 years of age and younger will assist in airway management and may be required to keep the head in neutral alignment.

EMERGENCY MEDICAL RESPONDER (EMR) CARE *If trained and authorized:*

NONTRAUMATIC CARDIAC ARREST: BLS CARE

1. Ventilate:
   A. Initially, high flow 100% 0_2 using an oral airway, bag-valve system, and proper size mask.
   B. Ventilate the patient with two ventilations for each 30 compressions for single person CPR in the infant and child.
   C. Ventilate the patient with two ventilations for each 15 compressions for two-person CPR in the infant and child.
   D. Ventilate the patient with one ventilation every 3-5 seconds once an advanced airway is established.
2. Perform CPR (compression rates 100/minute)
   A. In children <8 years old, if a pulse is not palpable or heart rate is < 60/min and signs of poor systemic perfusion are present
   B. Until adequate perfusion is restored
   C. If instructed by a physician.
3. Turn on AED, and follow prompts from the machine.
4. Position on backboard and prepare for immediate transport.

TRAUMATIC CARDIAC ARREST: BLS CARE

Care for traumatic cardiac arrest differs in the following ways:

1. While manually stabilizing the neck, open the airway using the modified jaw thrust or chin lift technique. Provide manual stabilization during all airway procedures until the patient is secured on a board with C-collar.

4. Control major external bleeding.
5. Assess chest for life-threatening injuries, e.g. sucking chest wound, flail chest and treat as appropriate.
6. Apply C-collar, then logroll patient onto backboard. Check back for injuries.

HYPOTHERMIC CARDIAC ARREST CARE: Hypothermic cardiac arrest differs in the following ways:
1. Take 30 - 45 seconds to confirm pulselessness or profound bradycardia. Perform CPR if no pulse is felt after 30 - 45 seconds.
2. Perform all treatments and transportation as gently as possible to avoid precipitating V-fib.
3. Remove wet garments and protect against further heat loss and wind chill through the use of blankets and heated patient compartment.
7. Maintain horizontal position, avoiding rough and excessive movement.
8. Severe hypothermia is frequently preceded by other disorders (e.g. drowning, overdose or trauma). Assess for and treat these underlying conditions while simultaneously managing the hypothermia.

EMERGENCY MEDICAL TECHNICIAN (EMT) CARE *If trained and authorized, in addition to above:*

NONTRAUMATIC CARDIAC ARREST: BLS CARE
1. Consider ALS response.
2. Transport to closest appropriate medical facility.
3. Apply EKG for non-diagnostic purposes if available.

TRAUMATIC CARDIAC ARREST: BLS CARE

Care for traumatic cardiac arrest differs in the following ways:
1. Prepare for immediate transport. Attempt to keep scene times to five minutes.
2. May apply AED/monitor to monitor heart rate. Do not delay transportation.
3. Begin transport to Level I Pediatric Trauma Center.
4. Apply EKG for non-diagnostic purposes if available.

HYPOTHERMIC CARDIAC ARREST CARE: Hypothermic cardiac arrest differs in the following ways:
1. Transport to a Level I Pediatric Trauma Center if profound hypothermia is suspected.
2. Apply EKG for non-diagnostic purposes if available

ADVANCED EMT CARE *If trained and authorized, in addition to above:*

TRAUMATIC CARDIAC ARREST: ALS

Care for traumatic cardiac arrest differs in the following ways:
1. Establish large bore IV(s) enroute to hospital.

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

NONTRAUMATIC CARDIAC ARREST: ALS CARE

In addition to above and as appropriate:
1. Apply monitoring electrodes and/or pediatric defibrillation patches or paddles.
2. Identify rhythm; treat as follows:
   - **A. Ventricular fibrillation or pulseless ventricular tachycardia:**
     1. Defibrillate @ 1 J/lb. (2 J/kg).
     2. Resume CPR immediately after defibrillation; reassess adequacy of ventilation, oxygenation and compressions.
     3. May establish more definitive airway with ET; continue to ventilate with 100% 0_2
     4. Insert orogastric tube if evidence of gastric distention.
     5. Establish vascular access (IV/IO) with NS.
     6. Check pulse, VF/Pulseless VT defibrillate @ 2 J/lb. (2 J/kg) after 2 minutes of CPR completed.

7. Follow PALS Guidelines for drug dosing.
8. Check pulse, VF/Pulseless VT defibrillate @ 2 J/lb. (4 J/kg) begin CPR.
9. Contact monitoring physician for further orders.

B. **Asystole or PEA**:
1. Continue CPR.
2. Establish more definitive airway with ET; continue to ventilate with 100% 0_2.
3. Insert orogastric tube if evidence of gastric distention.
4. Consider and treat underlying causes, e.g. hypoxia, tension pneumothorax, hypovolemia, etc.
5. Establish vascular access (IV/IO) with NS
6. Follow PALS Guidelines circulate with cardiac compressions.
7. Consider reversible causes of Asystole or PEA
8. Contact monitoring physician for further orders.

4. Position on board. Immobilize head if patient is intubated.
5. If intubated, recheck and document ET tube checks with every move and before entering the emergency department.

TRAUMATIC CARDIAC ARREST: ALS CARE for traumatic cardiac arrest differs in the following ways:
1. Attach ECG monitor enroute.
2. Establish IV(s) and/or IO(s) enroute; consider fluid boluses of 20 cc/kg, reassessing patient after each bolus.
3. If V-fib or V-tach, follow algorithm above.
2. If asystole or PEA, follow algorithm above. Do not delay scene times to administer medications.
3. Perform *needle jet insufflation* (<8 y/o) ASAP if unable to ventilate due to traumatic airway obstruction.
4. Perform *pericardiocentesis* ASAP if cardiac tamponade is suspected.
5. Perform needle *chest decompression* ASAP if tension pneumothorax is suspected.
6. Attempt *pericardiocentesis* and bilateral needle *chest decompression* prior to considering discontinuation of resuscitation efforts in traumatic arrest.

HYPOTHERMIC CARDIAC ARREST CARE: Hypothermic cardiac arrest differs in the following ways:
1. Administered medications can accumulate to toxic levels if used repeatedly in the severely hypothermic patient. If the patient fails to respond after one shock or initial drug therapy, subsequent defibrillations or additional medication should be avoided but CPR should be continued.

SPECIAL NOTES:
1. Children who are pronounced dead secondary to SIDS or suspicious circumstances should be left at the scene whenever possible to avoid disturbance of a possible crime scene. Observe and note: location, position, ambient temperature, objects around child including mattress and bedding, behavior of all people present, explanations provided and presence of vomit in the mouth or foreign body.
2. Use pediatric triangle.
6. Consider contacting department Chaplin or other support person.
7. Use Broselow™ tape for medication dosages.

END

Back to Index ↑

Cardiac – Chest Pain and Arrhythmias

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:

1. Typical or atypical chest pain w/ or w/o radiation. 2. Feeling of impending doom & denial. 3. Shortness of breath. 4. Nausea & vomiting. 5. Jugular vein distention, pedal edema and rale. 6. Neuro: syncope, dizziness or weakness. 7. Skin: pale, cyanotic, clammy or diaphoretic. 8. Abnormal vital signs (fast, slow, high, low, irregular) or arrhythmias.	1. Cardiorespiratory disease. 2. Onset & duration. 3. Quality & severity (on a scale of 0 - 10). 4. Relieving factors (nitro, rest, antacids). 5. Meds (esp. cardiac & impotence meds). 6. Recent illness or trauma. 7. PMH/Meds/Allergies. 8. Substance abuse. 9. DNR status.

PRECAUTIONS:

1. This guideline refers to spontaneously breathing and perfusing patients.
2. Syncopal episodes in patients may be cardiac-related.

EMERGENCY MEDICAL RESPONDER (EMR) CARE *If trained and authorized:*

1. Administer oxygen with the goal to obtain a SaO_2 >95%. Attempt to obtain SaO_2 at room air if time permits and document any changes after O_2 applied.
2. Place patient in position of comfort and reassure.

EMERGENCY MEDICAL TECHNICIAN (EMT) CARE *If trained and authorized, in addition to above:*

1. Request ALS response early.
2. Apply EKG for non-diagnostic purposes if available. Obtain *12-lead ECG if trained and equipped*.
3. If indicated:
   a. Administer 324mg of aspirin.
   b. Assist patient with prescribed *nitroglycerine* unless BP < 110/p. **Caution:** Withhold Nitroglycerin if Patient had erectile dysfunction medication within 24 hours (Viagra or Levitra) or within 48 hours for using Cialis.

ADVANCED EMT CARE *If trained and authorized, in addition to above:*

1. Consider *CPAP* for pulmonary edema.
2. Establish IV of NS TKO. A second line should be established when time allows enroute.
3. ALS with IV training:
   A. If systolic BP falls < 90, administer a 500 cc NS fluid bolus and repeat vitals.
   B. If IV is established and systolic BP is at least 110, administer 0.4 mg *nitroglycerine S*L, may repeat every 5 minutes up to 3 doses.

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

1. Provide **continuous EKG monitoring**. Treat life threatening dysrhythmias as indicated.
2. Administer **Normal Saline Boluses of 500 ml** as needed to maintain a systolic blood pressure of ≥100 mm/Hg in cases of cardiogenic shock with or without right ventricular involvement (RVI) to a total of 2000 ml. Continuously assess lung sounds.
3. If pain persists after 2 SL doses apply **Nitroglycerin paste** to chest per guideline. Ensure that the systolic blood pressure is ≥110 mmHg prior to application.
4. Administer **Morphine Sulfate 4 mg IV**, up to a maximum of 10 mg for chest pain not relieved by Nitroglycerin that is likely of cardiac etiology.
   a. **Midazolam (Versed) 2-5 mg IV/IN**, up to a maximum single dose of 5 mg in lieu of Morphine Sulfate, if chest pain is suspected due to CNS stimulants (cocaine, methamphetamine, etc.).
5. **Ondansetron (Zofran) 4mg IV** for nausea /vomiting .
6. Only symptomatic and significant PVC's (frequent, coupled, multiform, or close-coupled), AICD firing, and non-sustained V-tach:

I. Administer *Amiodarone* 150 mg IV/IO slowly (2-3 minutes) using a buretrol or IV piggyback.

For tachycardias:

A. Apply oxygen, establish IV NS and place patient on a cardiac monitor. Document rhythm strip. Assess and collect patient information.

B. Sinus tachycardia is the most common rapid rhythm. Identify and treat the cause as appropriate

C. **Regular Narrow Complex Tachycardias** (**PSVT**)
   I. Attempt Valsalva maneuver by asking patient to "bear down"
   II. Administer *Adenosine* 6.0 mg rapid IV/IO push, immediately flush with 10 ml NS and raise arm. Assess rate and rhythm response.
   III. If no response, may repeat *Adenosine* 12.0 mg rapid IV/IO push, immediately flush with 10 ml NS and raise arm. Assess rate and rhythm response.
   IV. Print strip from monitor while performing above procedures. e. If patient becomes unstable (↓BP), preform synchronized electrical cardioversion.

D. **Irregular Narrow Complex Tachycardias** (**AFib, Aflutter, or MAT**)
   I. Identify new/old and time/day of onset. > 48 hours has risk of atrial clot formation.
   II. If stable, monitor patient's rhythm. Perform 12 lead EKG. c. If patient becomes unstable (↓ BP), preform synchronized electrical cardioversion.

E. **Regular Wide Complex Tachycardias** (**VTach or uncertain**)
   I. If stable, monitor patient's rhythm. Perform 12 lead EKG.
   II. Consider administering Adenosine 12 mg IV/IO rapid push **or** Amiodarone 150 mg IV/IO slowly over 2-3 minutes, using either a buretrol or IV piggyback. **Do not bolus**.
   III. If patient becomes unstable (↓BP), preform synchronized electrical cardioversion. Caution with patient's that have a history of WPW.

F. **Irregular Wide Complex Tachycardias** (**AFib w/ aberrancy or pre-excited AFib / WPW**)
   I. If stable, monitor patient's rhythm. Perform 12 lead EKG.
   II. Contact Medical Control. Consider administering *Amiodarone* 150 mg /IO slowly over 2-3 minutes, using either a buretrol or IV piggyback. **Do not bolus**.
   III. If patient becomes unstable (↓BP), preform synchronized electrical cardioversion.

G. **Synchronized Cardioversion** will be performed whenever a patient is in an abnormal tachycardia and demonstrates signs and symptoms of being unstable.
   I. Consider pre-medicate with *midazolam* (*Versed*) or *lorazepam* (*Ativan*) per medication guideline. RSI medics may consider use of *Etomidate* for pre-medication. (Watch BP).
   II. With synchronized button "On", select appropriate energy per manufacturer's guidelines, charge monitor, "Clear" the patient and hold the discharge button in until the shock is released. Print rhythm strip.
   III. Repeat using manufacturer recommended energy if rhythm does not convert. Contact Medical control physician for further orders.

For Bradycardia:

A. Unstable
   I. *Atropine* 0.5 mg IV/IO
   II. *Dopamine Infusion* 2-10mcg/Kg/Min *or Epi Infusion* 2-10 mcg/min as alternative to pacing
   III. No change – immediate pacing, set rate at 80 and ma by 5-20 mA until electrical capture, then assess for mechanical capture
   IV. If no change consider 2nd dose of *Atropine* 0.5mg IV

B. Stable
   I. Monitor with frequent re-evaluation.

For hypotension:

A. If no response to initial 500 cc NS fluid bolus, administer additional 500cc NS bolus and consider *Dopamine* infusion 5 - 20 mcg/kg/min. titrated to patient response. May repeat fluid challenge if hypotension continues.

For pulmonary edema:

A. Start *CPAP* therapy if appropriate and available.
B. BP ≥ 140/p give 0.8 *nitroglycerine* SL q. 3-5 min to patient response, if BP 90/p-139/p, administer 0.4 mg of *nitroglycerine* SL every 3 - 5 minutes titrated to patient response.
C. Administer *Morphine* 4-6 mg IV/IO slowly titrated to patient response.
D. Consider *Albuterol*/*Atrovent* neb if lung sounds are hard to assess or if rales are questionably wheezes.

PEDIATRIC CONSIDERATIONS:

1. Do not administer any meds or perform Cardioversion on any conscious patient < 12 years without physician order.

SPECIAL NOTES:

1. Aspirin has been shown in multiple studies to decrease death from patients having an MI. All patients with suspected cardiac related chest pain who are not allergic or who have not taken aspirin in the last 12 hours should be given 324mg aspirin.
2. In the setting of an acute myocardial infarction, rapid assessment, treatment, and undelayed transport are essential to avoid further delays to in-hospital treatment, such as thrombolytics and angioplasty.
3. Patients complaining of cardiac signs and symptoms will have a *12-Lead ECG* done as soon as possible. Because treatment can affect how ST-elevation looks on a *12-Lead*, the 12-Lead should be performed with the initial set of vital signs.
4. **Nitrates (*nitroglycerine*) are absolute contraindication** when the person has taken **VIAGRA or LEVITRA** within 24 hours or **CIALIS** within 48 hours**. Nitrates will cause a severe drop in BP.**
5. Use caution when giving nitroglycerin to patients who have an Inferior MI.
6. Receiving hospital staff MUST be notified that nitro paste has been applied to avoid possible excessive dosing.
7. Administer Cardioversion energy according to manufacturer recommendations. Atrial fibrillation is more resistant to Cardioversion and generally requires a higher dose than PSVT or atrial flutter.

END

Back to Index ↑

Post Cardiac Arrest Induced Hypothermia

In Conjunction with United Hospital Level One Cardiac Program

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

INDICATIONS:

1. Cardiac arrest confirmed by EMS; defibrillator and CPR determined to be necessary.
2. Return of spontaneous circulation (ROSC) < 60 minutes from arrest.
3. Return of systolic BP ≥ 90 mmHg.
4. Unconscious or semi-conscious, unable to follow simple commands within 10 minutes of ROSC.

CONTRAINDICATIONS:

1. Less than 18 years of age.
2. Pregnancy.
3. Drug overdose.
4. Coma state prior to cardiac arrest.
5. Known terminal condition.
6. Non-cardiac cause of arrest (trauma, stroke, seizure, respiratory arrest, drowning).

RELATIVE CONTRAINDICATIONS: ***(Discuss with Medical Control)***

1. Known sepsis
2. Active Bleeding

PROCEDURE:

1. All guidelines for the application of ACLS apply.
2. Place patient onto backboard. **Note:** if cooling is probable, attempt to place patient in white cooling bag.
3. Titrate $ETCO_2$ to 40 – 45 mm Hg
4. Maintain oxygen saturation 94 – 98%. High pO_2 is harmful to ischemic brain tissue.
5. Obtain 12-lead ECG; identify STEMI and treat as appropriate.
6. Document cardiac rhythm at time of discovery after cardiac arrest.
7. Monitor vitals; treat arrhythmias as appropriate.
8. Ensure a minimum of two (2) secure IV or IO sites. IO is preferred.
9. Determine responsiveness to verbal commands:
   - **A. If responsive to verbal commands, this guideline <u>no longer applies</u>.**
   - B. If unresponsive to verbal commands:
     - i. If patient has advanced airway in place, may administer Versed 2 mg slow IV/IO as needed to maximum of 0.1 mg/kg for sedation and 0.1 mg/kg Vecuronium or 1 mg/kg Rockurium for paralysis.
     - ii. If patient does not have an advanced airway in place, consider RSI. Second paramedic will be needed for initial induction where no advanced airway is in place.
10. Treat hypotension (Sys BP < 80 mm Hg):
    - A. IV/IO bolus of NS (see iced saline below)
    - B. Administer 0.5 mg Epinephrine 1:10,000 IV/IO. If no change:
    - C. Preferred infusion is Dopamine at 5 – 15 mcg/kg/min.
    - D. May consider Epinephrine infusion of 0.1 – 0.5 mcg/kg/min. *(7 – 35 mcg/min in 70 kg adult)*
    - E. **or** Norepinephrine infusion 0.1 – 0.5 mcg/kg/min *(must obtain from hospital)*
      - i. Decrease infusion rate of vasopressors for heart rate > 130
    - F. Look for and treat any reversible causes (H's & T's)

11. Initiate therapeutic induction of hypothermia prior to arrival at Level One Cardiac Hospital:
    A. Administer 30 ml/kg bolus of approximate 4°C (39.2°F) NS over 30 minutes.
    B. Contact medical control if signs of pulmonary edema are present.
        i. 1000 ml per 15 minutes (75 kg = 2200 ml, 100 kg = 3000 ml, 125 kg = 3750 ml).
        ii. Maximum infusion is 4000 ml
    C. Expose patient's bare chest, and ensure all ECG, 12 lead, and defibrillation pads are applied to patient's chest.
    D. Cover patient's torso area with sheet or towels.
    E. Before placing patient in white cooling bag, place iced blue gel roll in bag, patient on top of roll and place ice packs on groin, axilla, and neck area. If appropriate, it is preferred to have the backboard under the cooling bag so cold water/ice remains in contact with the patient.
    F. Pour 2000 ml of liquid over sheet touching patient's torso.
    G. Monitor patient body temperature as able. Target temperature is 33°C (91.4°F). Note: this temperature will not likely be obtained with short transport times to St. Paul, MN.
        i. Oral, rectal, or esophageal methods are preferred
        ii. Axillary and tympanic methods are not useful
12. Transport to closest appropriate medical facility capable of maintaining therapeutic hypothermia.
13. Contact medical control with any questions.

SPECIAL NOTES:

1. May only be performed by Paramedic, CCTP, or qualified RN personnel.
2. This program has been developed in partnership with United Hospital, St. Paul Level One Cardiac Program and Dr. Jim Flink, Pulmonologist Intensivist.
3. Use of iced saline has been well documented as capable in inducing a 1 – 2°C reduction in core temperature. The problem is that the temperature begins to rebound as soon as the infusion is done and re-warming is harmful.
4. Ice bags have very poor contact with the skin even when applied on bare skin. Furthermore, patients are not disrobed in the field and their clothes are insulators. Wet clothing is an excellent conductor of thermal energy as illustrated by cases of hypothermia in people who are wet in outside temperatures of 50 – 60 °F.
5. Defibrillation in a wet environment has been determined safe according to the following references:
    a. American Journal of Emergency Medicine (2007) 25, 420–424; www.elsevier.com/locate/ajem
    b. Resuscitation (2006) 70, 247—253; www.elsevier.com/locate/resuscitation
    c. Zoll Medical Technical Report – Defibrillation On A Wet or Metal Surface

End

Back to Index ↑

Post Cardiac Arrest Induced Hypothermia Checklist

Date:	**Run #:**
Indications *(All must be met)*	
Cardiac arrest confirmed by EMS, CPR & defib used	❑ Yes ❑ No
Return of spontaneous circulation (ROSC) < 60 min from arrest	❑ Yes ❑ No
Systolic blood pressure ≥ 90 mm Hg	❑ Yes ❑ No
Unable to follow simple commands within 10 min of ROSC	❑ Yes ❑ No
Contraindications *(None can be present)*	
Less than 18 years old	❑ Yes ❑ No
Pregnancy	❑ Yes ❑ No
Drug Overdose	❑ Yes ❑ No
Coma state prior to cardiac arrest	❑ Yes ❑ No
Known terminal condition	❑ Yes ❑ No
Non-cardiac cause of arrest *(trauma, stroke, resp. arrest, etc.)*	❑ Yes ❑ No
Meet Criteria for Cooling?	❑ Yes ❑ No
Basic Procedure	
Obtain time down before CPR *(known or estimated)*	Time down: ❑ Known ❑ Estimated
Obtain time of ROSC	Time of ROSC:
Follow ACLS guidelines / Identify post arrest rhythm	Rhythm:
Place patient in cooling bag, then onto backboard	Time:
Titrate ETCO2 to 40 – 45 mm Hg	ETCO2:
O2 Sats from 94 – 98%	O2 Sats:
Obtain 12 Lead / Treat STEMI	12 Lead Rhythm:
Monitor vital signs / treat arrhythmias	
Establish minimum of 2 IV or IO's	
Secure airway or RSI if necessary	
Treat Hypotension:	
a. 0.5 mg Epinephrine 1:10,000 IV/IO	❑ Needed ❑ Not needed
b. Dopamine infusion 5 – 15 mcg/kg/min	❑ Needed ❑ Not needed
Administer 30 ml/kg bolus of approx. 39.2°F NS to max 4000 ml	Time:
a. may administer 1000 ml/15 min	Total NS infused:
Ensure all ECG, 12 lead and defib pads are applied	
Cover pt.'s chest with towel or sheet, then get wet	
Cover pt.'s chest, groin, axilla and neck area with ice	Time:
Monitor temp orally or rectally (Target is 91.4°F)	In-Transport Temp:
	Level One Arrival Temp:

Did patient re-arrest during transport to level one hospital?	❑ Yes ❑ No Time:
Number of shocks given if re-arrested during transport	# of Shocks:
If shocked did a perfusing rhythm return?	❑ Yes ❑ No Time:

* Please fill one of these out for each pre-hospital patient where potential induced hypothermia was used.

END

Back to Index ↑

Combative Patient/Restraints

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. Aggressive behavior/agitated 2. Confusion 3. Hallucinations	1. Past medical history 2. Medications and/or Allergies 3. Present illness/circumstances 4. Precipitating factors 5. Behavior exhibited

PRECAUTIONS:

1. Aggressive/combative behavior can be caused by several medical conditions. Some examples are: hypoglycemia, brain injuries, hypoxia, psychiatric disorders such as schizophrenia or paranoia and patients under the influence of alcohol and drugs.
2. Improperly applied restraints could possibly lead to permanent nerve damage, aspiration and death from respiratory compromise.
3. Do not restrain a patient who is actively seizing.
4. Be aware of items at the scene or medical equipment that may become a weapon.

EMERGENCY MEDICAL RESPONDER (EMR) CARE *If trained and authorized:*

1. If the scene is not safe, evacuate everyone and seek additional resources. Involve law enforcement early to search the patient for weapons and to help secure them in restraints if needed.
2. Identify yourself to the patient and explain why you are on the scene.
3. Maintain a calm, reassuring and professional attitude and manner.
4. Remove disturbing persons and/or objects from the scene
5. Maintain a safe position and distance. Do not allow the patient to come between you and the exit
6. Provide emotional support to the patient. Do not argue or shout. Attempt to de-escalate situations by being calm and reassuring. Offer help to the patient. Be honest and concise.
7. Treat life-threatening injuries

EMERGENCY MEDICAL TECHNICIAN (EMT) CARE *If trained and authorized, in addition to above:*

1. An emergency transport hold must be obtained and completed whenever a patient is transported against their will. This should be completed by the police officer. Document.
2. If the scene is not safe to treat the patient unrestrained, the patient must be restrained using the following guidelines:
   A. EMS personnel must always act as the restrained patient's advocate.
   B. Restraints should be individualized and afford as much dignity as possible.
   C. Restraints should be humanely and professionally administered. Explain to the patient why you are using restraints, but DO NOT negotiate. Emphasize the therapeutic reasons for the restraints. Allow the patient the opportunity to cooperate.
   D. Restraints should employ the least restrictive method necessary to safely care for the patient.
   E. For the patients safety and the safety of EMS personnel, at least 4-5 people should be involved in applying restraints-do not try it alone! Law enforcement involvement is suggested when possible.
   F. Start with 4-point restraints with one arm secured above and one arm secured below the torso. Never leave only one limb in restraints.
   G. Make sure the patient is searched completely and remove all personal objects.

H. Documentation must include the reasons for restraint and the methods used. Frequent assessment of the patient and the restraints used must be documented including circulatory, motor and sensory status of the restrained extremity.
I. Restraining a patient's hands and feet together behind the patient (hog-tying) is not allowed.
J. Make sure the patient is properly secured during transport so they cannot escape out of a moving ambulance.

ADVANCED EMT CARE/INTERMEDIATE *If trained and authorized, in addition to above:*

1. EMS providers must be prepared to maintain an open airway and provide ventilations in all patients who receive chemical restraints.

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

1. ALS providers can use the following medications to chemically restrain a patient who has not responded appropriately to physical restraints (Haldol and Versed may be given in the same syringe):
   A. Haldoperidol (Haldol), 5mg IM prior to physician contract.
   B. Midazolam (Versed), 2mg IM if BP >90 systolic and the patient is <60 years of age.
   C. Diphenhydramine (Benadryl) 25mg deep IM.
2. Patients in agitated delirium, often associated with drug use, can experience sudden death. Patients with agitated delirium should receive oxygen, IV/IO, ECG monitoring and a complete set of vital signs including SaO_2 at least every 5 minutes. If chemical restraints are warranted, ALS providers can administer:
   A. Ketamine, 5 mg/kg IM in two separate administrations of 2.5 mg/kg each.
   B. Consider sodium bicarbonate 1mEq/kg IV/IO.
   C. Patients in agitated delirium can experience hyperthermia, cool appropriately.

PEDIATRIC CONSIDERATIONS:

1. Always attempt to involve parents when restraining children.

PREGNANCY CONSIDERATIONS:

1. Pregnant women should be restrained in a semi-reclining or left lateral recumbent position.

SPECIAL NOTES:

1. If an EMS provider feels uncomfortable with any patient, even when they have not been actively combative, the provider has the right and duty to provide the patient and others with the security of patient restraint. Verbal threats are a legitimate reason for restraint.
2. Patients must have the ability to understand what's happening, what medical treatment options are available to them and be able to make appropriate decisions according to their particular beliefs to make decisions concerning their care. Minors, the mentally ill, patients under the influence of drugs or alcohol, patients who are suicidal, patients who are hypoxic or have a medical condition that impairs their decision making ability may not be able to make appropriate decisions due to their condition. The EMS provider MUST be the patient's advocate.
3. Restraining a patient is still a point of legal and ethical debate because it deprives the patient of their constitutional right to liberty. Physical restraint misuse could result in charges of assault and battery, false imprisonment, and an infringement of the patient's constitutional rights. There are far more cases holding providers responsible for not treating/restraining a patient than false imprisonment or assault and battery. **Clear and complete documentation is important when restraints are used.**
4. Complications from chemical sedation are more numerous than from physical restraints. Remember once chemical restraints are used, they will limit the assessment of the patient's mental status and neurologic responses.
5. Soft restraints are available in each ambulance for arms and legs.

6. This guideline is not intended to limit or restrain Police/Paramedics from following their law enforcement policies.
7. Patients who are restrained should be transported to their usual hospital or one in their insurance group whenever possible.

END

Back to Index ↑

Congestive Heart Failure/Pulmonary Edema

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. Shortness of breath. 2. Swelling in lower extremities (Legs/Ankles). 3. Exercise intolerance.	1. Past medical history. 2. Medications and/or Allergies. 3. Present illness/circumstances. 4. Precipitating factors. 5. Myocardial infarction and other forms of ischemic heart disease, hypertension, valvular heart disease, and cardiomyopathy (CAD).

Congestive heart failure (**CHF**) occurs when the heart is unable to provide sufficient pump action to distribute blood flow to meet the needs of the body.

Left-sided failure
Common respiratory signs are tachypnea (increased *rate* of breathing) and increased *work* of breathing (non-specific signs of respiratory distress). Rales or crackles, heard initially in the lung bases, and when severe, throughout the lung fields suggest the development of pulmonary edema (fluid in the alveoli). Cyanosis which suggests severe hypoxemia is a late sign of extremely severe pulmonary edema.

Right-sided failure
Physical examination may reveal pitting peripheral edema. Jugular venous pressure (JVD) is frequently assessed as a marker of fluid status.

EMERGENCY MEDICAL RESPONDER (EMR) CARE *If trained and authorized:*

1. Assess and assure Airway, Breathing (status and condition), circulation.
2. Oxygen via non-rebreather mask if no history of COPD. If history of COPD, titrate oxygen delivery to maintain SPO2 > 90%. Consider intubation and hyperventilation with 100% oxygen for markedly decreased LOC, inability to maintain a patient airway, or for GCS <8.
3. Initiate IV lactated Ringer's TKO.
4. Attach cardiac monitor and pulse oximeter.
5. If signs of severe hypoventilation:
   a. Assist ventilations with BVM with 100% oxygen.
   b. Consider endotracheal intubation.
   c. Contact medical control.

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

If history of CHF, and patient exhibiting tachypnea, orthopnea, JVD, edema, moist breath sounds (rales):

1. Place in seated position (semi-fowler's.)
2. Administer nitroglycerin 1/150 sublingually (if BP >120 systolic.)
3. Administer Lasix 40-80 mg IV.
4. Consider Morphine 2-5 mg every 5 minutes (do not exceed a total of 10 mg). Carefully monitor blood pressure and respirations.
5. If systolic BP >100 mmhg, consider Dobutamine at 2-20 µg/kg/min to maintain systolic blood pressure >100 mmhg.
6. If systolic BP <100 mmhg, consider Dopamine at 2-20 µg/kg/min to maintain systolic >100 mmhg.
7. Consider Norepinephrine 0.5 - 30.0 µg/min if systolic <70 mmhg as ordered by medical control.

8. Contact medical control if not responsive to therapy.
9. Transport.

END

Back to Index ↑

Croup

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. Barking cough or hoarseness Retractions 2. Inspiratory stridor 3. Respiratory distress 4. May be febrile 5. Typically occurs in children 6 Mo.-3 Yrs. 6. Mild expiratory wheezing may be present 7. Complete airway obstruction (Rare)	1. Present illness including onset 2. History, allergies and medications 3. Home treatments and response 4. Immunizations 5. History of previous episodes.

PRECAUTIONS:

1. A foreign body obstruction can cause stridor and should be considered.
2. Cardiopulmonary arrest can occur in patients who are not adequately monitored and managed.
3. An oxygen mask or cannula should not be forced on a child if it results in severe agitation. Provide oxygen by blow-by method.
4. Sudden onset of symptoms with high fever, no barky cough, dysphagia, drooling, anxious appearance and sitting in the tripod position suggest epiglottitis.

EMERGENCY MEDICAL RESPONDER (EMR) CARE *If trained and authorized:*

1. Maintain an open airway and ensure proper ventilations. Apply oxygen directly or via blow-by. If needed, ventilate the child with a bag-valve-mask and supplemental oxygen.
2. Monitor vital signs including respiratory rate, oxygen saturation, pulse rate, blood pressure and temperature, capillary refill and work of breathing.
3. Avoid agitating the child.

EMERGENCY MEDICAL TECHNICIAN (EMT) CARE *If trained and authorized, in addition to above:*

1. Transport patient to appropriate facility.

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

1. If unable to ventilate the child, consider intubation.
2. For children, administer 0.5 mL nebulized racemic epinephrine with 3 mL of saline.

SPECIAL NOTES:

1. Impending respiratory failure is indicated by a change in mental statues, pallor, dusky appearance, decreased retractions and decreased breath sounds with decreasing stridor.
2. Children with the following require transport by ambulance: persistent stridor, significant respiratory distress, the administration of racemic epinephrine, and signs and symptoms of dehydration.
3. Children given a racemic epinephrine nebulizer need to be transported for further evaluation.

END

Back to Index ↑

Crush Injury

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. Pain 2. Loss of CMS in entrapped extremity 3. Bleeding at injury site. 4. Rapid onset hypovolemia /release of compressive force. 5. Dysrhythmias after release due to influx of Potassium Ions. 6. Signs of hyperkalemia: tall peaked t waves or widened QRS or serve bradycardia.	1. Past medical history. 2. Medications. 3. Allergies. 4. Present illness/circumstances. 5. Precipitating factors. 6. Behavior exhibited.

EMERGENCY MEDICAL RESPONDER (EMR) CARE *If trained and authorized:*

1. Confirm prolonged entrapment (> 1 hour) of one or more full extremities by a crushing object (vehicle, building rubble, hanging in harness, self, etc.).
2. Complete trauma assessment to evaluate patient for other injuries and treatments.
3. If extremity is accessible, check for decreased sensation, motor function, skin color and distal pulses.
4. Pre-Extrication:
   A. Apply oxygen via mask
   B. If extremity trapped and life threatening hemorrhage is anticipated, consider application of a tourniquet.
   C. Extricate.

EMERGENCY MEDICAL TECHNICIAN (EMT) CARE *If trained and authorized, in addition to above:*

1. Transport to a Trauma Center.

ADVANCED EMT CARE *If trained and authorized, in addition to above:*

1. Prior to extrication: start two large bore IVs with Normal Saline. Give 2 liters NS bolus followed by 500cc/hr. Prior to release of compression force in unaffected limb if possible.
2. Do not delay release of compression force for fluid administration.
3. Psychological Support.

INTERMEDIATE/PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

1. Provide pain management per guideline.
2. Monitor cardiac rhythm.
3. Consider Albuterol for possible hyperkalemia (peaked T-waves or wide QRS > 0.12 seconds), wheezing or bronchospasm: 3 ml (2.5 mg) of a 0.083% solution nebulized. May repeat.
4. Immediately prior to extrication, consider sodium bicarbonate 2 mEq/kg IV/IO up to 100 mEq (FOR CRUSH SYNDROME) unless tourniquet is in place.
5. Post-Extrication:
   A. Suspect hyperkalemia if T waves become peaked, QRS becomes prolonged (>0.12 sec) or hypotension develops.
   B. Consider Calcium Chloride 1gm IV/IO over 5 minutes for dysrhythmias thought to be caused by Hyperkalemia.
   C. Consider additional sodium bicarbonate.
   D. Be prepared for patient to experience a cardiac event

END

Domestic Violence

PRECAUTIONS:
1. Do not enter the scene until law enforcement has determined that the scene is safe.
2. Never confront the abuser.

RECOGNITION:
1. Domestic violence crosses all boundaries, including age, race, education, socioeconomic class and sexual orientation. While 95% of victims are women, men can also be victims.
2. The victim frequently will not admit to being abused.
3. Abuse should be suspected when injuries are inconsistent with the reported mechanism of injury or history and when patients appear ashamed or embarrassed about their injuries.
4. Domestic violence tends to involve contusions and lacerations.
5. The abuser is often unwilling to allow the victim to give the history or to allow the victim to be alone with EMS personnel.
6. Excessive delays between injury and seeking treatment, repeated use of EMS services, injuries during pregnancy, substance abuse and frequent suicide gestures are hallmarks of domestic violence.

PATIENT CARE:
1. Treat physical injuries according to guidelines. Assess the victim for the potential for self-harm.
2. Remove the victim from the scene as soon as possible, attempting to separate the victim and abuser.
3. Treat the victim and the abuser in a non-judgmental manner.
4. Do not ask questions about possible violence or display any empathy until after the victim and abuser have been separated.
5. Many victims feel ashamed, humiliated and responsible for the violence. Though sometimes frustrating for EMS personnel, it is important to treat all victims in a respectful, sensitive and empathetic manner. Helpful phrases include: “I am sorry this is happening to you.”, “You don’t deserve to be abused.”, “You didn’t cause the abuse.”, “Physical and sexual violence are against the law.” and “There is confidential help available whenever you choose to seek it.”
6. If the patient elects not to be transported to the hospital, attempt to provide a written list of community resources, including shelters and hotline numbers, which can be left with the victim.
7. Assess for the safety of other family members (esp. children and vulnerable adults). Notify law enforcement as appropriate.

PRESERVATION OF EVIDENCE:
1. Domestic violence is a crime. Attempt to preserve evidence whenever possible.

DOCUMENTATION/REPORTING:
1. Documentation should be comprehensive and exact. Document the victim’s own words. Record behavior and history obtained from victim, abuser and witnesses, especially if it conflicts.
2. Be precise when recording injuries; include type, number, size, location and explanations.
3. EMS personnel, who know or have reason to believe a child is being neglected or physically or sexually abused, shall immediately report the information to law enforcement personnel.

END

Back to Index ↑

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. Uncontrolled bleeding from nasal passage. 2. Nasal pain 3. Nausea 4. Vomiting	1. PMH/Meds/Allergies (HTN or anticoagulants) 2. Recent illness or trauma 3. Duration and quantity of bleeding 4. Previous episodes of nose bleeding 5. Lesions (ploys, Ulcers) 6. Trauma and HTN

Epistaxis

EMR, /EMT/ AEMT CARE *If trained and authorized:*

1. Universal precautions should be taken.
2. Compress nostrils with 4x4 gauze pads.
3. Compress with ice pack.
4. Tilt head forward.
5. Hold for up to 10 minutes or until you reach the ED.

INTERMEDIATE/PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

1. Consider HTN guideline.
2. If bleeding is continuous and BLS treatment is not working, consider placing a Rhino Rocket.

Rhino Rocket™

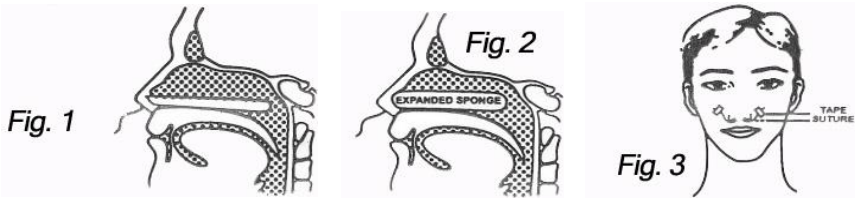
Indications and procedure for insertion of the Rhino Rocket

Indications
An uncontrolled nosebleed that has not responded to other methods of bleeding control. Patient must be transports if you insert this device.

Contraindications
The Rhino Rocket is contraindicated in facial trauma, specifically to the nose or sinuses, or where there is any gross deformity or suspected injury to the nose or sinuses. The Rhino Rocket may be used ONLY by paramedics.

Rhino Rocket™ Instructions

1. Insert compressed moisture sensitive expandable sponge into nasal cavity parallel to floor of nose or over the turbinate where gentle pressure is needed. Figure #1.
2. Moisture sensitive sponge should now expand. If no blood is present to allow expansion, add a few drops of saline. Figure #2.
3. Secure strings to side of face with small piece of tape. Place loop around ear. Figure #3.
4. The placement, number of packs as well as timing for removal should be decided clinically. In the average case, one pack is needed on each side and the packs should be removed within twenty-four (24) hours. More packs can be used when the airway is larger than normal.



Eye Injury

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. Pain 2. Bleeding at injury site. 3. Penetrating trauma.	1. Past medical history. 2. Medications. 3. Allergies. 4. Present illness/circumstances. 5. Precipitating factors.

If this is a chemical injury, secure safely and bring chemical container (in outside compartment of ambulance) or name of chemical with patient to the emergency department.

If this is a penetrating eye injury, secure the penetration in place before moving patient (if in a safe location for responders and patient).

EMR, /EMT/ AEMT CARE *If trained and authorized:*

1. Assess and assure Airway, Breathing, and Circulation. Obtain complete set of vital signs
2. Preform physical exam, eye injuries should be considered a "distracting injury".
3. If chemical injury, flush immediately with sterile normal saline. Continue flushing enroute for up to 20 minutes. May use IV bag of normal Saline.

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

1. If chemical injury or foreign body sensation, instill 2 drops Tetracaine ophthalmic drops (0.5% solution) in affected eye if patient not allergic to Tetracaine or the "caine" class of local anesthetics.
2. Contact medical control/MRCC for best transport destination. Transport without delay.
3. Assess need for pain control due to injury.
4. Contact medical control for any questions or problems.

End

Back to Index ↑

Epiglottitis

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. Occurs at any age, but usually between 2-7 years old. 2. Sudden onset of symptoms may occur. 3. High fever. 4. Shock may occur early. 5. Restlessness, irritability, and extreme anxiety are common. 6. Child often drools because swallowing is difficult or painful 7. Stridor with marked suprasternal, subcostal, and intercostal retractions. 8. Cyanosis. 9. Tripoding or other position of comfort. 10. Increased heart rate. 11. Rapid shallow breathing.	1. Onset of symptoms. 2. History, allergies and medications. 3. Recent history of bacterial or viral infection. 4. Vaccinations, -specifically *influenza* type b.

PRECAUTIONS:

1. Do not attempt to intubate or visualize the cords, or place anything in the patient's mouth.
2. Complications can include: airway obstruction, aspiration, septic shock and death from asphyxia.

EMR, /EMT/ AEMT CARE *If trained and authorized:*

1. Avoid agitating the child because this can cause airway obstruction.
2. Maintain and open airway and ensure proper ventilations. Apply oxygen. If needed, ventilate the child with a bag-valve-mask and supplemental oxygen.
3. Monitor vital signs including respiratory rate, oxygen saturation, pulse rate, blood pressure and temperature.
4. Maintain position of comfort.

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

1. Transtracheal insufflation may be needed if patient is in respiratory arrest

SPECIAL NOTES:

1. Due to vaccinations, epiglottitis can be seen more commonly in adults.

END

Firefighter Rehab

Firefighters report to rehab to have air bottles refilled, obtain food and fluids, and rest. Baldwin Area EMS Department employees will assess firefighters as they enter the rehab area. Firefighters reporting or presenting with weakness, dizziness, chest pain, muscle cramps, nausea, vomiting, altered mental status, difficulty breathing, or exhaustion must be assessed.

Firefighters with the above signs and symptoms will have the following assessed:

1. Glasgow coma trauma score
2. Pupils
3. Blood pressure, pulse and respiratory rates, and SaO_2
4. Lung sounds
5. Skin color, temperature, and moisture
6. Oral temperature
7. Cardiac monitor (if chest pain, irregular pulse, dizzy, or faint)

Firefighters may not be allowed to return to duty if any of the following are noted:

1. Glasgow score less than 15
2. Irregular, nonreactive, or sluggish pupils
3. Systolic blood pressure < 100 or > 170
4. Diastolic blood pressure < 60 or > 100
5. Pulse rate greater than 140
6. SaO_2 less than 95% on room air
7. Wheezes, crackles, or diminished lung sounds
8. Oral temperature greater than 100.6° F.
9. Chest pain or ectopy

Firefighters removed from service will have their signs and symptoms treated using accepted medical protocols and will be reassessed at least every 15 minutes. Firefighters may return to service when acceptable vital signs are obtained and other criteria are met.

The fire incident commander must be notified immediately if a firefighter chooses to return to duty prematurely.

The firefighter rehab sheet shall be completed for each incident, listing all firefighters that went through rehab area. A run form must be completed for each firefighter that is removed from duty or transported.

If a firefighter needs transport to a hospital via ambulance, another ambulance is to be paged for the standby before you transport.

END

Back to Index ↑

Heat Related Injuries

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. Nausea & vomiting. Muscle cramping. 2. Dizziness or fainting. Full, rapid pulse. 3. Skin: red, hot, clammy (dry in late stages). 4. Neuro: ↓ LOC, seizures, unconscious, abnormal behavior, confusion. Use Caution approaching!	1. Prior events leading up to. 2. Allergies. 3. Recent vomiting. 4. Last oral intake of liquids. 5. Temperature.

DEFINITION OF HEAT ILLNESS:
Heat illnesses occur when the body's physiologic responses are no longer effective. When the body's mechanisms are overwhelmed, potentially fatal heatstroke develops.

TYPES OF HEAT ILLNESSES:
1. Heat syncope
Dizziness or fainting after exposure to high temperatures is caused by vasodilation. This usually is seen in persons unaccustomed to extreme heat.

2. Heat cramps
Acclimatized athletes and laborers often have heat cramps at the end of work or during post recovery. These painful muscle contractions result from fluid volume depletion caused by profuse sweating.

3. Heat exhaustion
From excessive loss of body water and electrolytes. Symptoms include cool, clammy skin, fatigue, nausea, vomiting, dizziness, and irritability. Heat exhaustion may be difficult to differentiate from heatstroke. In heat exhaustion, core temperature is usually < 102.2°F and mental status is not seriously impaired.

4. Heatstroke
The body's core temperature is > 105°F and central nervous system impairment causing delirium or coma are characteristic. High body temperatures damage almost every organ, including liver, kidneys, lungs, heart, and muscle. Signs of heatstroke include bright red dry skin, tachycardia, hypotension, and tachypnea.

EMERGENCY MEDICAL RESPONDER (EMR) CARE *If trained and authorized:*

1. Assess and support ABCs. Consider oral or nasal airway initially if GCS < 9.
2. Begin high flow supplemental oxygen via mask.
3. Assess vital signs (BP, pulse, respirations, O2 sats) minimally every 10 minutes.
4. Expose patient to assist cooling. May move to a climate-controlled environment if possible.
5. Determine which type of heat related illness you are dealing with.

ADVANCED EMT CARE *If trained and authorized, in addition to above:*

1. Establish IV of NS set to TKO.

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

1. Monitor ECG for abnormalities.

PEDIATRIC CONSIDERATIONS:

1. Same as adult.

SPECIAL NOTES:

1. Cooling of a patient must be done appropriately. Cooling a body too fast or too slow could cause further harm to the body. Core temperatures must be monitored closely.
2. Contact medical control if there are any further questions.

END

Back to Index ↑

Hydrofluoric Acid/Fluorine Exposure

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. Skin corrosion, ulceration, blisters, or burns. 2. Excruciating pain. 3. Eye discomfort w/ tearing or visual disturbance. 4. Eye, nose, or throat irritation. 5. Coughing, painful breathing, pulmonary edema. 6. Cardiac arrhythmias, esp. prolonged Q-T segment (occurs just prior to arrest). 7. Severely reddened, swollen areas with blanched, whitish regions.	1. PMH/Meds/Allergies. 2. Concentration & temperature of HF. 3. Duration of exposure. 4. Elapsed time since exposure. 5. First aid measures instituted prior to arrival. 6. Enclosed or open space exposure. 7. How exposure occurred.

INTRODUCTION:

Hydrofluoric acid (HF) is primarily an industrial material. It is used in stainless steel, aluminum, organic and inorganic chemicals, and electrical component manufacturing, in iron and steel foundries, metal finishing, petroleum refining, mineral processing, and glassmaking. Employees that work with the chemical will be a valuable resource to EMS personnel and are usually familiar with and trained in first aid measures. Many companies have HF exposure kits available as well that contain the antidotes (medications).

HF differs from other acids because of its unique ability to penetrate tissue, bind body calcium and persist in its action for some time after initial exposure. Anhydrous HF causes immediate and serious burns on contact. Concentrations above 50% cause immediate burns and rapid tissue destruction. Initial therapy is important because it may bring tissue destruction to a halt. Fluorine gas is a powerful oxidizer. It rapidly forms HF on contact with moisture. HF gas causes skin and eye irritation, delayed burns, lung damage and pulmonary edema. It is fortunate that the odor threshold is very low compared to the levels that can cause harm to health. These warning properties give people working with the material an opportunity to escape.

PRECAUTIONS:

1. Extremely hazardous liquid and gas.
2. Concentrations < 50% may not produce symptoms for 3 to 8 hours.
3. Relief of pain is an excellent indication of the success of treatment.
4. Take appropriate precautions and wear impervious (nitrile) gloves when treating victims.
5. Do not induce vomiting for ingestions.

EMERGENCY MEDICAL RESPONDER (EMR) CARE *If trained and authorized:*

1. Administer oxygen.
2. Remove contaminated clothing and flush exposed areas (including eyes) with copious amounts of water for at least 20 minutes.

EMERGENCY MEDICAL TECHNICIAN (EMT) CARE *If trained and authorized, in addition to above:*

1. Immediate care is extremely important. Even minor exposures should be transported to a Burn Center.

ADVANCED EMT CARE *If trained and authorized, in addition to above:*

1. Establish IV of NS TKO.
2. Initiate cardiac monitoring.

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

6. HF rapidly depletes body calcium. Be prepared to administer IV/IO calcium chloride or calcium gluconate.

END

Back to Index ↑

Hyperglycemia

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. Fever, chills. 2. Infection signs. 3. Increasing thirst 4. Increasing urine output	1. Last meal. 2. PMH/Meds (insulin use or oral meds)/Allergies. 3. Recent activity level & Last blood sugar reading. 5. Recent vomiting. 6. Consider other potential causes of symptoms: CVA, alcohol, seizures, overdose, and head injury.

Some patients with hyperglycemia have diabetic ketoacidosis (DKA), which is a life-threatening complication of diabetes that includes severe dehydration and metabolic acidosis. Patients with DKA may have Kussmaul's respirations, which are rapid and deep.

EMERGENCY MEDICAL RESPONDER (EMR) CARE *If trained and authorized:*

1. Routine medical care, monitor O2 to keep >94%.

EMERGENCY MEDICAL TECHNICIAN (EMT) CARE *If trained and authorized, in addition to above:*

1. Check blood glucose with meter.

ADVANCED EMT CARE/INTERMEDIATE/PARAMEDIC/CCTP/RN If *trained and authorized,* ***in addition to above***

1. Blood glucose > 400 mg/dL initiate IV 0.9% NS and run wide open, assess vitals and lung sounds every 250ml to avoid fluid overload.

END

Back to Index ↑

Hypoglycemia

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. Rapid onset. Dizziness or fainting 2. Slurred speech and drooling 3. Full, rapid pulse 4. Skin: pale, cool, clammy or very diaphoretic 5. Neuro: ↓ LOC, seizures, unconscious, abnormal behavior, confusion.	1. Last meal. 2. PMH/Meds (insulin use or oral meds)/Allergies. 3. Recent activity level & Last blood sugar reading. 5. Recent vomiting. 6. Consider other potential causes of symptoms: CVA, alcohol, seizures, overdose, head injury.

PRECAUTIONS:

1. An altered or decreased LOC masks the signs of injury and illness. Any patient that is unconscious or has an altered mental status has the potential for a spinal injury.
2. Call medical control before giving oral/IV/IO sugar and glucagon if BS is known to be > 70 mg/dL.

EMERGENCY MEDICAL RESPONDER (EMR) CARE *If trained and authorized:*

2. If indicated, administer oxygen and consider oral or nasal airway initially.

EMERGENCY MEDICAL TECHNICIAN (EMT) CARE *If trained and authorized, in addition to above:*

1. Perform blood glucose testing. Normal blood sugar (BS) range is 80 - 120 mg/dL for adults, 60 - 100 mg/dL for children, and 30 - 80 mg/dL for newborns.
   A. If BS is < 70 mg/dL and patient is conscious and cooperative, administer one of the following:
      a. One tube oral glucose (Glutose = 25 gm/tube, Insta-Glucose = 31 gm/tube). This is preferred over simple carbohydrate foods.
      b. Fast-acting, simple carbohydrates such as orange juice, given orally
   B. If BS is < 70 mg/dL and patient has an altered level of consciousness, but is protecting their airway:
      a. Administer 1 tube oral glucose (Glutose = 25 gm/tube, Insta-Glucose = 31 gm/tube) in downside cheek of log-rolled patient. Administer slowly, monitoring absorption/airway.
      b. Repeat BS testing as necessary (i.e. patient does not improve).
2. BLS with medication training:
   A. If patient is uncooperative or has decreased LOC, administer 1 unit dose glucagon* IM.

ADVANCED EMT CARE/INTERMEDIATE *If trained and authorized,* ***in addition to above****:*

1. If BS is <70 mg/dL (with or without altered LOC):
   A. Establish IV (preferred) 18ga. + or I/O of NS TKO.
   B. Administer ½ AMP of 12.5 gm 50% dextrose IV/IO, retest B.S. in 2 minutes. Administer 2nd ½ AMP if B.S. remains below 80, maybe added to bag of NS and run in.
   C. If IV/IO cannot be established, administer 1 unit dose glucagon* IM.
   D. Improve of mental status can take up to 20 minutes.

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

Refer to above as appropriate.

PEDIATRIC CONSIDERATIONS:

1. Pediatric medication administration is per physician order only. Anticipate $D_{50}W$ at 1.0 ml/kg for children >2 years; $D_{25}W$ at 2.0 ml/kg for children ≤ 2 years; and $D_{10}W$ at 5.0 ml/kg for neonates.

SPECIAL NOTES:

1. Sign off must have someone responsible there with them and written Non-Transportation Information sheets on Low Blood Sugar must be given to all patients.
2. All patients on oral hypoglycemic agents should be transported.

END

Back to Index ↑
Back to Index ↑

Hypothermia & Frostbite

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. Shaking/Shivering 2. Syncope 3. Slurred/slow speech 4. Slow pulse 5. Skin: pale, cool, clammy, red (white/black in late stages) 6. Neuro: Altered LOC, seizures, unconscious, abnormal behavior, confusion.	1. Prior events leading up to 2. Allergies 3. Temperature 4. Consider other potential causes of Symptoms such as CVA, alcohol, seizures, overdose, head injury.

PRECAUTIONS:

1. An altered or decreased LOC masks the signs of injury and illness.
2. Any patient with severe frostbite should be warmed slowly or further damage may occur to the tissues.
3. Do not remove frozen clothes that may be stuck to the skin.
4. Do not rub any frostbitten digits.

EMERGENCY MEDICAL RESPONDER (EMR)/EMT CARE *If trained and authorized:*

1. Assess and support ABCs.
2. Consider oral or nasal airway initially if GCS < 9.
3. Assess vital signs (BP, pulse, respirations, O2 sats) minimally every 10 minutes; more often if deemed unstable.
4. Begin high flow supplemental oxygen via non rebreather with goal to obtain SpO2 > 95%. Oxygen 4-6L per NC or 10-15L per NRM as appropriate.
5. Begin warming patient slowly.
    a. Remove all wet clothes from patient.
    b. Wrap patient in blankets.
    c. Move patient to climate-controlled environment.
6. Wrap all blisters with dry sterile dressings.
7. Do not break any blisters.
8. Frostbitten digits should be warmed slowly. (Warm water baths or blankets, no rubbing)

ADVANCED EMT CARE/INTERMEDIATE *If trained and authorized,* ***in addition to above****:*

1. Establish IV of warm* NS to TKO.
2. Consider advanced airway if patient goes unresponsive.
3. Notify medical control of therapy given. Further orders must come from monitoring physician.

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

1. Consider ET intubation if necessary.
2. Monitor ECG for abnormalities.
3. Consider transporting patient to a facility with heart/lung bypass capabilities if patient is unresponsive.

PEDIATRIC CONSIDERATIONS:

1. Same as adult.

SPECIAL NOTES:

Use extreme caution when handling frostbitten patients. Improper treatment of frostbite could further harm patient's tissues.

END

Back to Index ↑

Hypovolemia and Shock

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. Fever, Chills.	1. Symptom onset & duration.
2. Complaint of nausea or vomiting.	2. Quality & severity (on a scale of 1 - 10).
3. Impending doom.	3. Recent illness or trauma.
4. Trauma or acute illness.	4. PMH/Meds/Allergies.

Shock is defined as inadequate perfusion of vital organs. Potential causes of hypovolemia and shock may include:

1. Distributive Shock
   A. Septic
   B. Neurogenic
   C. Anaphylaxis
2. Obstructive Shock
   A. Tension Pneumothorax
   B. Cardiac Tamponade
   C. Aortic Dissection/Aneurysm
   D. Pulmonary Embolism
   E. Supine Hypotensive Syndrome
3. Metabolic Shock
4. Cardiogenic Shock
5. Hypovolemic Shock
6. Heart Rhythm Disturbances

EMERGENCY MEDICAL RESPONDER (EMR)/EMT CARE *If trained and authorized:*

1. Control external hemorrhage.
2. Keep patient flat with lower extremities elevated (if applicable).
3. Immobilize suspected major fractures (pelvis, femur, spinal) Conserve body temperature.
4. Secure and maintain airway by performing non-visualized airway, if indicated.
5. Oxygen non-rebreather 10-15 lpm.
6. Consider early ALS Intercept and expedite transport.

ADVANCED EMT CARE/INTERMEDIATE *If trained and authorized,* ***in addition to above****:*

1. Establish large bore IV/IO of NS.
2. Consider a 2nd IV LR or NS during transport.

3. Initiate a 500 - 1000 ml fluid bolus wide open (Check lung sounds every 250ml), to reach systolic BP of 90 mmHg.
4. Identify underlying cause and refer to the appropriate protocol.

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

1. If hypovolemia is not believed to be the cause of hypotension consider **Dopamine infusion** (2 to 10µg/kg/per min) if patient fails to respond to above treatments.

END

Back to Index ↑

Intravenous Access/Medicated Infusions

Where an IV is indicated to maintain a certain vital sign parameter it means that the IV will be wide open until that parameter is reached and then returned to TKO. This procedure will be repeated based on the continual reassessment of the vital signs.

INDICATIONS:

1. Bleeding or potential bleeding associated with trauma use Lactated Ringers 500mL bag.
2. Bleeding or potential bleeding from non-traumatic causes, i.e. ectopic pregnancy, GI bleed use Lactated Ringers 500mL bag.
3. Hypotension/dehydration from other causes, i.e. septicemia, hypothermia, anaphylaxis, spinal cord injury, protracted vomiting or diarrhea use Normal Saline 500mL bag.
4. Burn patients with arrhythmia, hypotension, delayed transport times, or need for analgesia use Normal Saline 500mL bag.
5. Diabetics with BS > 240 mg/dL or with signs of dehydration or when it is unclear if the situation is Ketoacidosis (DKA), use Normal Saline 500mL bag.
6. Diabetics with BS < 80 mg/dL use D5W 500mL bag of solution.
7. Fluid challenges
8. Anticipated need for multiple medication administration in:
    a. Cardiac patients
    b. Isolated head injuries with brief Loss of Consciousness (LOC), confusion or amnesia.
9. TKO lines in which hypovolemia is not present, i.e. status epilepticus or first time seizure, hypoglycemia, shortness of breath, drug overdose, tachycardia > 120, hypertension with systolic BP > 200 and CVA's.
10. All non-traumatic pediatric patients (< 12 years) requiring IV.

PEDIATRIC CONSIDERATIONS:

1. Obtain physician order for IV therapy in children < 1 year of age.

SPECIAL NOTES:

1. Vascular access may be established in adults prior to medical control contact.
2. For penetrating, thoracic, or abdominal trauma and all trauma patients with a systolic BP < 90 or pulse > 120, attempts at IV insertion should not delay transport. Obtain IV access enroute in these patients unless there is prolonged extrication.
3. Distal sites, such as the forearm, are preferred in non-critical patients. The antecubital site can be used in cases where rapid cannulation is required, i.e. cardiac arrest or severe trauma.

4. Hickman catheters and AV shunts should never be used for prehospital venous access, except in the setting of cardiac arrest or physician order. Avoid placing IVs in the same extremity as shunts if possible.
5. Document site, type fluid, rate, needle gauge, and total volume infused in PCR.
6. If IV solutions have been "setup" (tubing inserted into bag) prior to use, the date and time of the setup must be documented on the IV bag with tape. Do not write directly on IV bag. This setup must be used within 24 hours of the time it was prepared.
7. Do not over infuse fluids. Maintain systolic blood pressure of 90 to 100 mmHg.
8. Do not allow infusing IV solution bag to run dry.

Medicated Infusion
Paramedic, CCTP, and Registered Nurses may monitor medication infusions during inter-facility transports. See specific medications in "Medication" Section of patient care guidelines.
END

Back to Index ↑

Latex Sensitive-Allergic Patient

This guideline shall be used for patients with a known sensitivity or allergy to latex products. Baldwin Area EMS purchases latex free products including exam gloves (we use nitrile), IV start kits, BP cuffs, latex free tape, oxygen masks and cannulas, and electrodes.

The STANDARD OF CARE for the patient identified as being sensitive/allergic to latex:

1. Provide emergency care as needed. Providing critical emergency medical care should not be delayed to modify latex containing equipment.
2. If a product is required for emergency patient care and contains or possibly contains latex, cover all latex sites with cloth, gauze, or latex free tape to prevent direct patient contact
3. If the patient has a "latex-free treatment kit" in the home or on their person, the contents should be used as needed.

EMERGENCY MEDICAL RESPONDER (EMR)/EMT CARE *If trained and authorized:*

1. Observe standard body substance isolation (BSI) procedures.
2. Remove latex agent/sources if possible.

ADVANCED EMT CARE/INTERMEDIATE/PARAMEDIC/RN *If trained and authorized,* ***in addition to above****:*

Baldwin Area EMS vehicles carry only latex free IV start kits including tourniquet, IV catheters, IV tubing, and all other ALS airway equipment.

END

Back to Index ↑

Nausea & Vomiting

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. Complaint of nausea or vomiting.	1. Symptom onset & duration. 2. Quality & severity (on a scale of 1 - 10). 3. Recent illness or trauma. 4. PMH/Meds/Allergies.

EMERGENCY MEDICAL RESPONDER (EMR)/EMT CARE *If trained and authorized:*

1. Assess airway (place adjunct as necessary)
2. Assess breathing (administer oxygen as necessary)

ADVANCED EMT CARE/INTERMEDIATE *If trained and authorized,* ***in addition to above****:*

1. Establish IV of NS at KVO rate.

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

1. **Check for allergies, or history of Akathisia** *(an extreme form of internal or external restlessness)* or **Dystonia** (*a muscle tension disorder involving very strong muscle contractions*.)

2. Administer Zofran (Ondansetron Hydrochloride).
   A. Administer 4 mg IV push over 2-5 minutes.
   B. Monitor patient for vomiting and potential airway compromise.
   C. If needed, a repeat dose of 4mg IV can be administered without physician order.
   D. Do not give to patients < 12 years without physician order.
   E. Children weighing less than 40 kg = 0.1 mg/kg. Children weighing more than 40 kg = 4 mg IV push over 2-5 minutes.

3. *or* Administer Promethazine (Phenergan):
   A. Adults: Phenergan 12.5 mg (diluted in 10 cc NS) slow IVP. Repeat dose X (1) if necessary to a max dose of 25mg IV.
   B. Pediatrics: Must contact Medical Control prior to administration Phenergan 0.25 mg/kg (diluted in 10 cc NS) slow IVP. **No Repeat Dosage**. Max dose 12.5mg
   C. N**ot to be used in patient under 2 years of age.**

4. *or* Prochlorperazine (Compazine):
   A. Adult: 5-10mg IV/IM

B. Pediatric: Patient 6 months to 2 years: 0.15/mg/kg dose IV/IM not to exceed 10mg
C. Greater than 2 years old: 0.25-0.5 mg/kg IV/IM (max).

5. *or* Insert NG tube if emesis continues, and no contraindications to inserting.

Notes

1. Phenergan may cause Akathisia (inability to remain still or increased urge to move around) or dystonia (muscle spasms, rigidity, or rolling of eyes) may occur. If noted, administer Benadryl 25 mg IVP.
2. Prophylactic administration of antiemetic's in patients should be avoided

END

Back to Index ↑

Neurologic Related Signs & Symptoms (CVA/TIA)

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. Unilateral paralysis, numbness or weakness. 2. New onset seizure activity. 3. Sudden, unexplainable headache. 4. Inability to walk or "found down". 5. Altered mental status. 6. Dizziness, loss of balance or coordination. 7. Blurred or decreased vision. 8. Slurred speech; inability to speak or understand simple statements.	1. Cardiorespiratory & cerebrovascular disease. 2. Symptom onset & duration. 3. Quality & severity (on a scale of 1 - 10). 4. Normal level of function. 5. Substance abuse. 6. Recent illness or trauma. 7. PMH/Meds/Allergies. 8. DNR/DNI status. **9. TIME LAST KNOWN WELL.**

PRECAUTIONS:

1. Syncopal episodes and seizures may be cardiac-related.

EMERGENCY MEDICAL RESPONDER (EMR) CARE *If trained and authorized:*

1. Administer oxygen.
2. Place patient in semi-reclining position with head elevated 30 - 45° if tolerated, unless evidence of trauma, manage airway and ensure adequate ventilations, then take spinal precautions as indicated.

EMERGENCY MEDICAL TECHNICIAN (EMT) CARE *If trained and authorized, in addition to above:*

1. Assess blood sugar. If BS is < 70 follow hypoglycemia guideline.
2. Obtain 12-lead ECG (if approved) if cardiac etiology is suspected or dysrhythmia is present.
3. Complete Cincinnati Stroke Scale and document results on run form.

ADVANCED EMT CARE/INTERMEDIATE *If trained and authorized, in addition to above:*

1. Establish IV of NS TKO.
2. Initiate ECG monitoring.

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

1. Treat arrhythmias as indicated.
2. For hypertension, use caution with administration of any medication intended to lower blood pressure.
3. Call receiving hospital, discuss with Medical Control:

a. Transport to Baldwin if they activate the "tele-stroke" Physician or transport to United Hospital if directed to do so from the field.

END

Back to Index ↑

Pain Management

SIGNS AND SYMPTOMS:	OBTAIN HISTORY OF:
1. Pain associated with: A. Isolated musculoskeletal traumatic injury. B. Acute burns. C. Abdominal pain of known origin. D. Suspected kidney stones. *(Toradol is most effective).* 2. Anxiety due to the above.	1. Past use of pain medications. 2. Known hypersensitivity or allergies.

PRECAUTIONS:

1. Decreased level of consciousness.
2. Hypotension.
3. Closed head injury.
4. Other precautions pertinent to each medication listed below.
5. The elderly patient due to increased sensitivity to pain medications.

EMERGENCY MEDICAL RESPONDER (EMR) CARE *If trained and authorized:*

1. Obtain patient history, allergies, and current medications.
2. Obtain a complete set of vital signs initially, noting mental status and reevaluate at least every five minutes if patient is unstable.
3. Evaluate, rate and document the patient's pain using the 0-10 scale.
4. Ensure patient is restless due to pain and not hypoxia.
6. Consider measures including position of comfort, icepacks, splinting, and padding.
7. Reevaluate pain after treatments using 0-10 scale.

EMERGENCY MEDICAL TECHNICIAN (EMT) CARE *If trained and authorized, in addition to above:*

1. Consider ALS response.

ADVANCED EMT CARE *If trained and authorized, in addition to above:*

1. Establish IV NS TKO.

INTERMEDIATE CARE *If trained and authorized, in addition to above:*

Medication	IV/IO Dose	IM Dose	IN Dose	Inhaled Dose
Morphine sulfate	4-6 mg	4-6 mg	N/A	N/A

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

Medication	IV/IO Dose	IM Dose	IN Dose	Inhaled Dose
Nitrous Oxide	N/A	N/A	N/A	Until pain is controlled
Fentanyl	2 mcg/kg up to 100 mcg	2 mcg/kg up to 100 mcg	2 mcg/kg up to 100 mcg	N/A
Hydromorphone (Dilaudid)	0.5 to 1 mg (2 mg. max)	1 mg.	N/A	N/A
Morphine sulfate	4-6 mg	4-6 mg	N/A	N/A
Midazolam (Versed)	2 mg	2 mg	2 mg	N/A
Lorazepam (Ativan)	1-2 mg	1-2 mg	1-2 mg	N/A
Ketorolac	30 mg	60 mg (deep)	N/A	N/A
Ketamine	0.5 to 1 mg/kg	4-5 mg/kg	3-5 mg/kg	N/A

1. Reevaluate vitals, rate of pain on a 1-10 scale and patient's response after each medication is used. Document all information on run sheet.
2. Monitor O_2 saturation on all patients receiving pain control by medications.
3. Consider the use of capnography to assess ventilations when using pain medications.
4. Be prepared to suction airway, assist respirations and manage airway when using the above medications.
5. When combining medications, use caution due to possible respiratory and cardiovascular depression. Pts. should be monitored with cardiac monitor.
6. Benzodiazepines should be used as an adjunct to pain control for patients with severe burn pain or muscle spasms (Choose Versed, Valium or Ativan).
7. When using Toradol be cautious of possible intracranial bleed or any new bleeds
8. If acute pain is not controlled with the above treatments, contact medical control physician for additional orders

PEDIATRIC CONSIDERATIONS:

1. Administration of the following medications for pain control is authorized prior to contact with medical control:

Medication	IV/IO Dose	IM Dose	IN Dose	Inhaled Dose
Nitrous Oxide	N/A	N/A	N/A	Until pain is controlled
Fentanyl	1 mcg/kg bolus up to 30 mcg	1 mcg/kg bolus up to 30 mcg	2mcg/kg up to 50 mcg	N/A
Morphine sulfate	0.1 mg/kg	0.1 mg/kg	N/A	N/A
Midazolam (Versed)	0.05 mg/kg (max = 2 mg)	0.05 mg/kg (max = 2 mg)	0.1 mg/kg (max =f 2 mg)	N/A
Lorazepam (Ativan)	0.05 mg/kg (max = 2)	0.05 mg/kg (max = 2)	N/A	N/A
Ketorolac tromethamine (Toradol)	N/A	N/A	N/A	N/A

2. Contact Medical Control Physician for medication order of a secondary dose in patients < 12 y.o. if patient pain is not managed.

SPECIAL NOTES:

1. All patients reporting significant pain and requiring intervention with pain medication must be transported by ALS.
2. Geriatric patients may require smaller doses of medications.
3. Patients suffering from muscle spasms may benefit more from Versed than Morphine.
4. Burn gel dressings may provide significant relief from pain associated with burns. Be aware of the possibility of hypothermia if using burn gel on a greater than 10% burn.
5. Each medication has its own precautions; make sure you are familiar with each medication and how they can potentiate each other when used together.
6. Document any issues/side effects such as respiratory distress, nausea/vomiting, diaphoresis, vagal response or anaphylactic reactions.
7. Maintain awareness for drug seeking behavior.

END

Back to Index ↑

PAIN - Intranasal Medication Administration

Purpose: This optional procedure authorizes intranasal medication administration by EMS using an FDA approved atomizing device. This procedure authorizes the substitution of the intranasal route for other routes specified in the individual guidelines as approved for specific indications stated below by local medical control.

The MCA approved indications are:

1. Adult seizures
2. Pediatric seizures
3. Sedation
4. Adult pain control Pediatric pain control
5. Altered mental status with suspected Opiate Overdose

Contraindications:

1. Nasal Trauma
2. Epistaxis, nasal congestion, (significant) nasal discharge
3. Known cocaine use is a relative contraindication

Indications: In general, the intravenous route is preferred for medication administration. This procedure may be considered when IV access is unavailable and when needleless delivery system is desired because of patient agitation, combativeness, or similar conditions that may pose a safety risk to personnel.

1. Select the appropriate medication and dosage (see table)
2. Draw up appropriate dose (volume) of medication plus an additional 0.1 ml to account for device dead space
3. Attach atomizing device to syringe
4. Use one hand to support the back of the patient's head as needed
5. Place the tip of atomizing device snuggly against nostril aiming slightly upward and outward
6. Rapidly administer one half of dose of medication, briskly pushing plunger
7. Repeat with the other nostril delivering the remaining volume of medication

Notes:

1. **Use most concentrated form of medication.**
2. **Do not dilute.**

3. **Max 1 cc per nostril.**

END

Back to Index ↑

Poisoning/Overdose

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. GCS < 15; abnormal behavior. 2. Traumatic injuries; needle tracks. 3. Pupils: dilated, constricted, [1], sluggish. 4. Seizures; incontinence. 5. Hypothermia, hyperthermia. 6. Snoring respirations. 7. Irregular/unstable vital signs; arrhythmias.	1. Scene factors: needles, pills, suicide notes, etc. 2. Recent injury or illness. 3. Substance abuse. 4. Toxic exposure. 5. Onset and duration. 6. Medic alert tags. 7. PMH (esp. seizures, diabetes, CVA)/Meds/Allergies.

PRECAUTIONS:

1. An altered or decreased LOC masks the signs of injury and illness. Any patient that is unconscious or has an altered mental status has the potential for occult trauma and/or spinal injury.

EMERGENCY MEDICAL RESPONDER (EMR) CARE *If trained and authorized:*

1. Take spinal precautions if history is unreliable due to unconsciousness or altered mental status.
2. Consider oral/nasal airway if GCS < 9. Assist ventilations if decreased LOC and respirations < 10 or > 30.
3. Administer oxygen.
4. Contact National Poison Control Center (1-800-222-1222) and follow the operator's treatment instructions within your scope of practice.
5. Apply restraints as necessary.
6. Collect emesis looking for pill fragments and bring with patient to hospital.

EMERGENCY MEDICAL TECHNICIAN (EMT) CARE *If trained and authorized, in addition to above:*

1. Perform blood glucose testing. If BS is < 80 follow hypoglycemia guideline.
2. Consider ALS response.
3. Monitor patient with CO oximetry device if available. If the patient has no fire/smoke exposure, CO poisoning is suspected, AMS or history of unconsciousness, transport to the patient directly to HCMC.
4. If trauma can be ruled out, position patient in recovery position during transport.
5. Intentional overdose with intent to harm oneself must be transported. Obtain emergency transport hold if patient is unwilling to cooperate.

ADVANCED EMT/INTERMEDIATE CARE *If trained and authorized, in addition to above:*

1. Initiate cardiac monitoring. Perform 12-lead if cardiac ischemia is suspected.

2. Establish IV of NS. Consider 500 cc fluid challenges in any adult patient with systolic BP < 90.
3. For narcotic overdose if respiratory status is compromised: An initial dose of up to 2 mg Naloxone IV/IO (titrated to respiratory status).

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

1. Consider ET intubation in any patient with a GCS <9.
2. For beta-blocker overdose: consult with medical control physician regarding administration of calcium chloride and glucagon.
3. For calcium channel blocker overdose: consult with medical control physician regarding administration of calcium chloride and glucagon.
4. For tricyclic overdose: If bradyarrhythmias, multifocal PVC's, V-tach, hypotension or widened QRS (≥100ms) are present, administer 1 mEq/kg sodium bicarbonate and contract medical control.
5. For cocaine or methamphetamine overdose: consider administration of midazolam/lorazepam 2mg IV/IO/IM. Contact Medical Control Physician for possible sodium bicarbonate orders. Cool patient as needed.

Class of drugs	Treatment Indications	Specific Treatment(s)
Narcotics	Narcan may be used in cases of oversedation due to narcotic administration, or in suspected narcotics overdoses in patients without a history of long-term use, chronic abuse or addiction. Signs of narcotic overdose or oversedation include: decreased level of consciousness, pinpoint pupils (except Demerol), and respiratory depression. Caveat: Giving Narcan to a long-term narcotic user, chronic abuser or addict can induce narcotic withdrawal, which creates a new set of difficult problems. Airway management and supportive care is the preferred approach.	For patients with narcotic overdose or oversedation give: Narcan per dosing as above. If no response, reconsider diagnosis. Contact medial control.
Benzodiazepines (BZD)	Benzodiazepine abuse or overdose can lead to decreased level of consciousness, respiratory depression and hypotension.	Treatment consists primarily of aggressive airway support.
Tricyclic Antidepressants (TCA)	Decreased level of consciousness; hypotension, seizures, malignant arrhythmias (e.g. Torsades de Pointes, VT), prolongation of the QT or QRS intervals. Caveat: Patients with TCA overdoses are prone to deteriorating very quickly. Note: Sodium containing solutions act like antidotes, because they protect the heart against the toxic effects of the TCA. Induced alkalosis from bicarbonate and hyperventilation also protect against the toxic effects of TCAs.	Give 20ml/kg Normal Saline Bolus. May Repeat. Sodium Bicarbonate 1 mEq/ml/kg IV bolus. Repeat as directed by medical control. Treat arrhythmias according to the appropriate protocol. Treat seizures according to the Pediatric Seizure Guidelines.
Beta Blockers	Profound bradycardia, hypotension or conduction defects Hypoglycemia	Contact medical control. Consider Glucagon 0.03-0.1 mg/kg/dose every 20 minutes as needed slow IVP. Max Dose: 1 mg/dose.
Calcium Channel Blockers	Profound bradycardia, hypotension or conduction defects	Contact medial control.

Amphetamines	Agitation, psychosis, or ventricular arrhythmias Caveat: For patients with Excited Delirium, refer to the Agitated & Combative Patients Guidelines.	Contact Medical control.
Cocaine	Agitation, seizures, or ventricular arrhythmias Caveat: For patients with Excited Delirium, refer to the Agitated and Combative Patients Guideline.	Contact Medical control.
Organophosphate Poisoning (Pesticides and Nerve Agents)	Profound bradycardia, seizures, abnormal (wet) lung sounds The organophosphate toxidrome: S – Salivation, Seizures L – Lacrimation U – Urination G – GI vomiting and diarrhea B – Bradycardia*, bronchorrhea, bronchospasm A – Arrhythmias M – Miosis (small pupils)* * Tachycardia and mydriasis (dilated pupils) are also possible Caveat: Organophosphates are highly toxic in very small quantities and pose a significant risk to EMS and health care workers through secondary contamination.	Atropine 0.02mg/kg IV or IM every 3-5 min until lung sounds clear to auscultation. Use atropine in the initial treatment of bradycardia and seizures. Contact Medical Control. For rescuers who inadvertently enter a vapor cloud of organophosphate (e.g. nerve agents), self administer 1 – 2 Mark I Auto Injector Kits and evacuate yourselves from the scene immediately.

END

Back to Index ↑

Rapid Sequence Induction (RSI)

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized*

INDICATIONS:

- Respiratory insufficiency or respiratory arrest that can't be intubated due to non-flaccid state.
- Suspected closed head injury with GCS < 9.
- Unconscious or altered mental status with airway compromise.
- Potential airway compromise due to acute burns.

CONTRAINDICATIONS:

- Fat, bull neck. Known anatomical deformities or Throat cancer.
- Non-arrested croup, epiglottitis.
- Ankylosis (immobility, clenching, or fixation of the jaw).'
- Suspected or known fractured larynx
- Known anatomical airway anomalies

PROCEDURE:

1. Take universal precautions including eye and face protection. Communicate team responsibilities.
2. Assemble and check required equipment, attach and monitor ECG.
3. Establish and assure that IV/IO is secure and patent (preferably two).
4. Calculate, prepare and verify all medications with second paramedic.
5. Attempt to raise/maintain Sa O2 > 94% prior to beginning.
6. ⍟ Pre-medicate pediatric patient with atropine as appropriate.
7. Sedate (Choose most appropriate):
    - Etomidate (most commonly used; do not use in adults with systolic blood pressure <80)
    - Ketamine (use if potential hypertension would not be detrimental)
8. Paralyze (choose most appropriate):

- Succinylcholine (short acting; most commonly used; use if no contraindications)
- Roccuronium (long acting; use if succinylcholine is contraindicated; prepare for long-term airway management if intubation fail.
- Vecuronium (Because this is a longer acting paralytic compared to succinylcholine, be prepared for long-term airway management if intubation fails

9. Wait 30-60 seconds, announcing time and SaO2 every 15 seconds
10. Perform ET intubation for up to 30 seconds, then oxygenate. Two Attempts per paramedic only. If unsuccessful, BVM & insert King Airway, if unsuccessful, use oral airway and BVM.
11. Confirm and document tube placement, secure tube with appropriate device. Consider applying rigid cervical collar to minimize tube migration. Frequently reassess ET tube placement.
12. Insert gastric tube as appropriate.
13. Maintain Paralysis with a long-acting paralytic.
14. Maintain sedation and consider analgesia

⍟ PEDIATRIC CONSIDERATIONS:

- If RSI is repeated, it is not necessary to repeat atropine; treat bradycardia with oxygen.

SPECIAL NOTES:

- Each RSI must have either two Paramedics or a Paramedic and RN or 2 qualified RN's at the patient's side at the initial paralysis. One paramedic is needed for maintenance.

ADULT Rapid Sequence Induction

WEIGHT		SEDATION		SHORT-TERM PARALYTIC	LONG-TERM PARALYTIC	
Weight (#)	Weight (kg)	ETOMIDATE 0.3mg/kg	KETAMINE 3mg/kg	SUCCINYLCHOLINE 2mg/kg	VECURONIUM 0.1mg/kg	ROCURONIUM 1mg/kg
50 #	23 kg	7 mg	68 mg	45 mg	2 mg	23 mg
60 #	27 kg	8 mg	82 mg	55 mg	3 mg	27 mg
70 #	32 kg	10 mg	95 mg	64 mg	3 mg	32 mg
80 #	36 kg	11 mg	109 mg	73 mg	4 mg	36 mg
90 #	41 kg	12 mg	123 mg	82 mg	4 mg	41 mg
100 #	45 kg	14 mg	136 mg	91 mg	5 mg	45 mg
120 #	55 kg	16 mg	164 mg	109 mg	5 mg	55 mg
140 #	64 kg	19 mg	191 mg	127 mg	6 mg	64 mg
160 #	73 kg	22 mg	218 mg	145 mg	7 mg	73 mg
180 #	82 kg	25 mg	245 mg	164 mg	8 mg	82 mg
200 #	91 kg	27 mg	273 mg	182 mg	9 mg	91 mg
220 #	100 kg	30 mg	300 mg	200 mg	10 mg	100 mg
240 #	109 kg	33 mg	327 mg	218 mg	11 mg	109 mg
260 #	118 kg	35 mg	355 mg	236 mg	12 mg	118 mg
280 #	127 kg	38 mg	382 mg	255 mg	13 mg	127 mg
300 #	136 kg	41 mg	409 mg	273 mg	14 mg	136 mg
320 #	145 kg	44 mg	436 mg	291 mg	15 mg	145 mg
340 #	155 kg	46 mg	464 mg	309 mg	15 mg	155 mg
360 #	164 kg	49 mg	491 mg	327 mg	16 mg	164 mg
380 #	173 kg	52 mg	518 mg	345 mg	17 mg	173 mg
400 #	182 kg	55 mg	545 mg	364 mg	18 mg	182 mg

⍟PEDIATRIC Rapid Sequence Induction

WEIGHT		PREMEDICATION	SEDATION	SHORT-TERM PARALYTIC	LONG-TERM PARALYTIC	
Weight (#)	Weight (kg)	ATROPINE (If < 7yo) Dose: 0.02mg/kg (min 0.1mg, max 0.5mg)	ETOMIDATE 0.3mg/kg	SUCCINYLCHOLINE 2mg/kg	VECURONIUM 0.1mg/kg	ROCURONIUM 1mg/kg
5 #	2.3 kg	0.1 mg	0.7 mg	4.5 mg	0.2 mg	2.3 mg
10 #	4.5 kg	0.1 mg	1.4 mg	9.1 mg	0.5 mg	4.5 mg
15 #	6.8 kg	0.1 mg	2 mg	13.6 mg	0.7 mg	6.8 mg
20 #	9.1 kg	0.2 mg	2.7 mg	18.2 mg	0.9 mg	9.1 mg
25 #	11.4 kg	0.2 mg	3.4 mg	22.7 mg	1.1 mg	11.4 mg
30 #	13.6 kg	0.3 mg	4.1 mg	27.3 mg	1.4 mg	13.6 mg
35 #	15.9 kg	0.3 mg	4.8 mg	31.8 mg	1.6 mg	15.9 mg
40 #	18.2 kg	0.4 mg	5.5 mg	36.4 mg	1.8 mg	18.2 mg
45 #	20.5 kg	0.4 mg	6.1 mg	40.9 mg	2 mg	20.5 mg
50 #	22.7 kg	0.5 mg	6.8 mg	45.5 mg	2.3 mg	22.7 mg
60 #	27.3 kg	0.5 mg	8.2 mg	54.5 mg	2.7 mg	27.3 mg
70 #	31.8 kg	0.5 mg	9.5 mg	63.6 mg	3.2 mg	31.8 mg
80 #	36.4 kg	0.5 mg	10.9 mg	72.7 mg	3.6 mg	36.4 mg
90 #	40.9 kg	0.5 mg	12.3 mg	81.8 mg	4.1 mg	40.9 mg
100 #	45.5 kg	0.5 mg	13.6 mg	90.9 mg	4.5 mg	45.5 mg

END

Back to Index ↑

Rattlesnake Bite

SIGNS & SYMPTOMS:		OBTAIN HISTORY OF:
1. Fang marks	6. Loss of sensation	1. Past Medical History, Medications and allergies.
2. Edema	7. Faintness	2. Onset, severity, & duration.
3. Bruising	8. Nausea/Vomiting	
4. Exhaustion	9. Seizure like tremors	
5. Weakness	10. Shock	

PRECAUTIONS:

1. If paged to a snakebite victim, consider notifying Medical Control.
2. Snakebites should be treated as rattlesnake bites unless proven otherwise.
3. Advise persons on scene not to move the victim unless absolutely necessary.

EMERGENCY MEDICAL RESPONDER (EMR)/EMT CARE *If trained and authorized:*

1. Have patient lay down with affected area lower than the heart, (recovery position if nauseated).
2. Apply oxygen if indicated by shortness of breath, poor color, and low O2 saturation. Begin high flow supplemental oxygen via non rebreather with goal to obtain SpO2 > 95%. Oxygen 4-6L per NC or 10-15L per NRM as appropriate.
3. Apple triangle bandages above and below the bite (accept above and elbow/knee joints). The bandage should be no tighter than a tourniquet when used to draw blood (i.e. CMS should remain intact).
4. Check pulses and capillary refill below the bandages, (consider pulse oximeter on affected limb).
5. If able, gently wash bite.
6. Splint the limb to reduce movement.

7. Keep patient warm.
8. Have patient avoid exertion.

ADVANCED EMT/INTERMEDIATE CARE *If trained and authorized, in addition to above:*

1. Contact Medical Control for Epinephrine orders if indicated for shock.
2. Initiate IV TKO in unaffected limb with fluid boluses only as indicated for shock.

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

1. Initiate ECG monitoring and check frequently.
2. Monitor and treat for hypotension.

SPECIAL NOTES:

1. Significant symptoms occur in only about 20% of snakebite victims, and death is extremely unlikely.
2. NEVER cut the bite or try to suck out the venom.

END

Back to Index ↑

Respiratory Emergencies: Asthma/COPD

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. Dyspnea, tachypnea, or hyperventilation. 2. Cough (productive or nonproductive). 3. Wheezing, stridor, or crowing. 4. Rales, rhonchi, ¯ or ¹ lung sounds. 5. Difficulty speaking & accessory muscle use. 6. Orthopnea or tripod positioning. 7. Cyanosis, ¯ O_2 sats, agitation or anxiety.	1. Past Medical History, Medications and allergies. 2. Cardiorespiratory disease. 3. Onset, severity, & duration. 4. Relieving factors (rest, inhaler, nebs). 5. Recent illness or trauma. 6. Substance abuse (esp. tobacco). 8. Environmental or allergen exposure.

EMERGENCY MEDICAL RESPONDER (EMR) CARE *If trained and authorized:*

1. Assess respiratory effort/quality by listening to lung sounds and by assessing their speech-to-breath ratio (1-word, short sentences or full sentences). Document initially and after each treatment.
2. Administer oxygen and monitor O_2 saturation. Place patient in position of comfort and reassure.
3. Using a BVM, assist respirations in patient with decreased LOC and respiratory rates of < 10 or > 30/min.

EMERGENCY MEDICAL TECHNICIAN (EMT) CARE *If trained and authorized, in addition to above:*

1. Consider ALS response early.
2. Initiate ECG monitoring and monitor capnometry if available. Consider 12-lead if cardiac etiology.
3. Start CPAP therapy if appropriate and available.

4. For wheezing, suspected asthma and COPD, administer Albuterol neb. Adults and children may receive continuous nebs on standing order at adult strength with reassessment in between if symptoms persist.
5. If an asthma patient is in need of respiratory support, decrease ventilations to 8 per minute and perform manual exhalation if lung deflation is poor.
6. **Suspected asthma and COPD**:
   A. Consider initiation of CPAP early if SpO_2 <90, RR>30 or unable to speak in full sentences.
   B. If wheezing or decreased breath sounds administer one Albuterol/Atrovent neb. If further nebs are indicated, Albuterol-only.
   C. For COPD patients with wheezing in respiratory distress, administer Albuterol and Atrovent
   D. For severe distress unrelieved by nebs, administer 0.3 mg epinephrine 1:1,000 SQ/IM in patients from 12 - 40 years.
9. **For pulmonary edema**:
   A. Consider initiation of CPAP early if SpO_2 <90, RR>30 or unable to speak in full sentences.
   B. Consider nebs (as above) if lung sounds are hard to assess or if crackles are questionably wheezes.

ADVANCED EMT/INTERMEDIATE CARE *If trained and authorized, in addition to above:*

1. Establish IV of NS TKO.
2. **For pulmonary edema**:
   A. BP > 140/p = Administer 0.4 mg of nitroglycerine SL every 3 - 5 minutes titrated to patient response.
   B. BP 110/p – 140/p = Administer 0.4 mg of nitroglycerine SL every 3-5 minutes titrated to pt. response.

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

1. **Suspected severe asthma and COPD:**
   A. Consider magnesium sulfate 2 gm (4 cc of a 50% solution) diluted in 10 cc of NS and administer by slow IV/IO push over 1 – 2 minutes.
   B. Consider Methylprednisolone (Solu-Medrol) **ADULT:** 125 mg IV or IM PEDIATRIC**:** 2 mg/kg IV or IM.
   C. Consider tension pneumothorax if patient is hard to ventilate with poor compliance and is hypotensive. Treat as appropriate with possible needle chest decompression.
2. **For pulmonary edema**:
   A. If Blood Pressure allows (SBP >100) consider IV NTG 5-20 mcg/minute, titrate to effect. Increase by 5 mcg/minute Q5 minutes until desired effect, stop if B/P < 100. May use NTG paste follow NTG guideline.
   B. Consider tension pneumothorax if patient is hard to ventilate with poor compliance, hypotensive and has narrowing pulse pressures or who has subcutaneous air. Consider needle chest decompression on affected side.

PEDIATRIC CONSIDERATIONS:

1. ALS: Children may receive one Albuterol/Atrovent neb at adult strength on standing order. If further nebs are indicated, additional Albuterol-only nebs may be given, as indicated.
2. ALS: Consider Racemic Epinephrine for croup patients who are in respiratory distress.

SPECIAL NOTES:

1. Patients who receive treatment for respiratory distress should be transported to a medical facility for further evaluation.

END

Back to Index ↑

Seizure

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. Skin: febrile and flushed, or normal. 2. Incontinence. 3. Tonic phase - body stiffening. 4. Clonic phase - body jerking. 5. Drowsiness, confusion, or unconsciousness. 6. Abnormal behavior. 7. Apnea and cyanosis.	1. Epilepsy or previous seizures. 2. CVA, tumor, or HTN. 3. Diabetes. 4. Substance abuse. 5. Recent trauma or illness (esp. fever, infection). 6. PMH/Meds (esp. anticonvulsants)/allergies. 7. Pre-eclampsia.

PRECAUTIONS:

1. Do not attempt to place anything into the airway of a seizing patient.
2. Be prepared to assist ventilations in (and possibly intubate) any patient who receives midazolam.
3. Seizures may be cardiac-related.

EMERGENCY MEDICAL RESPONDER (EMR) CARE *If trained and authorized:*

1. If actively seizing, do not restrain the patient. Protect from harm.
2. Assess and support ABCs. Consider nasal airway.
3. Place in recovery position if no evidence of trauma.
4. Administer oxygen.

EMERGENCY MEDICAL TECHNICIAN (EMT) CARE *If trained and authorized, in addition to above:*

1. Assess blood sugar. If BS is < 80 follow hypoglycemia guideline.
2. Consider ALS response
3. Initiate cardiac monitoring.
4. Obtain body temperature if patient appears febrile. Attempt to cool, but do not allow to shiver.

ADVANCED EMT/INTERMEDIATE CARE *If trained and authorized, in addition to above:*

1. Establish an IV TKO in any patient with a first time seizure (except children), recurrent or status seizures, or seizures associated with overdose, hypoglycemia, or trauma.

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

1. For actively seizing adult patients, give 1mg/min to a total of 0.1mg/kg midazolam (Versed) or 2mg lorazepam (Ativan

2. If IV cannot be established, administer 0.1mg/kg midazolam (Versed) or 2mg lorazepam (Ativan) IM. IM administration can use the 5mg/1mL concentration (maximum of 3 mL volume for IM injections).

PEDIATRIC CONSIDERATIONS:

A. No IV/IO Access give;
   a. **Midazolam (Versed)** 0.1-0.2 mg/kg IN/IM. Max 10 mg.
   b. May repeat in 5 minutes. Note IN/IM Versed should be 5mg/ml concentration.
   or
   c. **Diazepam (Valium)** rectally: 0.5 mg/kg <6 y/o; 0.3mg/kg 6-11 y/o; 0.2mg/kg >11y/o
   d. May repeat in 10 minutes for continued seizure give 0.2 mg/kg/dose.

B. IV/IO access give;
   a. **Lorazepam (Ativan)** 0.05-0.1mg/kg/dose up to 2 mg
   or
   b. **Midazolam (Versed)** 0.1-0.2 mg/kg IV. Max 10 mg.
   c. May repeat in 5 minutes. Note IN/IM Versed should be 5 mg/ml concentration.

Pediatric febrile seizures should be transported by ambulance.

END

Back to Index ↑

Smoke Inhalation/Carbon Monoxide Poisoning

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
8. Headache. 9. Dizziness and nausea. 10. Confusion, agitation or coma. 11. Cardiac arrhythmia. 12. Cardiopulmonary arrest.	1. Past Medical History, Medications and allergies. 2. Cardiorespiratory disease. 3. Onset, severity, & duration.

OVERVIEW: Suspect inhalation injury and respiratory damage in any victim of a thermal burn, and particularly if the patient has facial burns or was in an enclosed space.

PRE-HOSPITAL GOAL: Always protect providers from exposure to any hazardous materials. Extrication and rescue should be done by trained public safety personnel. Move the patient to a safe environment, administer 100 percent oxygen by mask, protect airway and assist breathing if indicated. Treat for shock or altered level of consciousness if indicated; maintain stable vital signs and transport promptly, particularly if respiratory damage is suspected. Consider intubation if patient has facial burns, soot sputum, wheezing, etc.

EMERGENCY MEDICAL RESPONDER (EMR)/EMT CARE *If trained and authorized:*

1. Assess airway (place adjunct as necessary)
2. Assess breathing (administer oxygen as necessary)
3. Assess circulation.
4. Assess disability.
5. Assess lung sounds and follow appropriate treatment.
6. Place patient on cardiac monitor
7. Transport patient in position of comfort

8. Reassess vital signs as indicated.

ADVANCED EMT/INTERMEDIATE CARE *If trained and authorized, in addition to above:*

1. Establish IV of NS at KVO rate.

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

1. Consider advanced airway protocols if other methods unsuccessful.

END

Back to Index ↑

Submersion

OVERVIEW: Drowning, or death from suffocation due to submersion, and near-drowning, or survival from near-suffocation due to submersion. Precipitating factors can include trauma, hypothermia, exhaustion, seizures and drugs and/or alcohol. Always assume that the patient may have a C-spine injury, and stabilize before removing patient from the water. Always assume all near-drowning victims may be hypothermic.

PRE-HOSPITAL GOAL: Begin airway management immediately including C-spine control. Remove patient from water as quickly as possible, maintaining C-spine control. Treat for hypothermia.

EMR/EMT CARE *If trained and authorized:*

1. Assess airway (place adjunct as necessary)
2. Assess breathing (administer oxygen as necessary)
3. Assess circulation.
4. Assess disability.
5. Maintain C-spine immobilization. Use appropriate protocol for immobilization.
6. Place patient on cardiac monitor
7. Refer to cardiac arrest protocol as indicated.
8. Transport patient.
9. Reassess vital signs as indicated

ADVANCED EMT CARE *If trained and authorized, in addition to above:*

1. Establish IV of NS at KVO rate.

INTERMEDIATE/PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

1. Consider advanced airway protocols if other methods unsuccessful.
2. Refer to ACLS protocols for management of cardiac arrest patient as indicated

END

Syncope

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. Passed out or fainted. 2. Associated symptoms Headache, dizziness, confusion/AMS, vomiting, diarrhea, dehydration, incontinence, seizure, lack of food or water.	1. Present illness. 2. History, allergies and medications. 3. DNR/DNI. 4. Hx. Heart, Stroke, syncope in past.

Goal of EMS therapy is to treat symptomatic bradycardia/hypotension.

EMERGENCY MEDICAL RESPONDER (EMR) CARE *If trained and authorized:*

1. Establish patient responsiveness. If cervical spine injury is suspected, stabilize the spine.
2. If trauma is present, dress the wound.
3. Gently lower the patient to a supine position or Trendelenburg position if hypotensive.
4. Administer oxygen to keep SpO_2 > 94% and <99%. Use a nasal cannula at 2 – 6 LPM or Non-rebreather mask at 10 – 15 LPM.
5. Obtain Orthostatic BP and Pulse if you are able.

EMERGENCY MEDICAL TECHNICIAN (EMT) CARE *If trained and authorized, in addition to above:*

1. Check blood glucose. If <70 refer to hypoglycemia protocol
2. Cardiac monitor

ADVANCED EMT/INTERMEDIATE CARE *If trained and authorized, in addition to above:*

1. Obtain IV assess. If patient is hypotensive, or shows signs of dehydration administer 250 ml fluid bolus of NS.
2. Place patient on ECG monitor.
3. (Intermediates) rule out cardiac arrhythmias.

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

1. Consider **Atropine .5mg-1mg IV if bradycardic and unstable** (refer to Bradycardia protocol)
2. Obtain a 12 lead ECG on all patients

END

Back to Index ↑

Tracheostomy

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. Ostomy opening with/without obturator.	1. Present illness. 2. History, allergies and medications. 3. Interventions taken before EMS arrival. 4. DNR/DNI.

PRECAUTIONS:

1. Avoid cross-contamination.

EMERGENCY MEDICAL RESPONDER (EMR) CARE *If trained and authorized:*

1. Establish patient responsiveness. If cervical spine injury is suspected, stabilize the spine.
6. If trauma is present, dress the wound.
7. In infants, position a child's airway in a neutral position. Place a towel under the infant/child's shoulders as needed.
8. Assess the patient's breathing, including rate, effort, adequacy of ventilation as indicated by chest rise and air flow, auscultation and inspection.
9. Check for a pulse. If no pulse or if the pulse is below 60 in a child (< 8 years of age) start compressions and continue to ventilate the patient via the tracheostomy.
10. If a pulse is present, obtain a set of vital signs including respiration rate, pulse rate, blood pressure, pulse oximeter and temperature (do not rely on SaO2 in patients with poor perfusion)
11. Obtain baseline vital signs from the patient's caregiver.
12. If secretions are present in the airway, use intermittent suction for no more than 10 seconds. Use 100 mm Hg or less of suction. If needed, administer 1-2cc of saline into tracheostomy to improve suctioning.
13. If the patient has adequate respirations, administer 100% oxygen by placing an oxygen mask over the tracheostomy.

EMERGENCY MEDICAL TECHNICIAN (EMT) CARE *If trained and authorized, in addition to above:*

1. Check and open the airway. Assess the tracheostomy tube and ensure that it is in place and not obstructed. If the obturator has been left in place, remove it to open the tracheostomy tube.
2. If the patient is in respiratory distress, attempt assisted ventilation through the tracheostomy tube. If the patient is on a ventilator, follow the ventilator-dependent guideline. If the tracheostomy is a double-lumen tube, the inner cannula must be in place for bag-valve device to connect.
3. If bronchospasm is present and patient has adequate ventilations, administer Albuterol/Atrovent via nebulizer over 10-15 minutes.
4. Transport patient to the appropriate facility
5. Bring the patient's medical information and other items that they have in their "go" bag.
6. Reassess the patient enroute often and obtain a set of vital signs every 5 minutes

ADVANCED EMT/INTERMEDIATE CARE *If trained and authorized, in addition to above:*

1. Place patient on ECG monitor and obtain IV assess.

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

1. If manual ventilation is difficult, change the tracheostomy tube.
   A. Ask the caregiver to replace the tube.
   B. If the tube cannot be replaced, ALS providers should attempt placing a smaller size ET tube no more than 2 inches into the opening and inflate the cuff. The tracheal tube introducer can be used to place the ET tube. Ensure proper placement by normal ET checks

END

Back to Index ↑

Trauma & Spinal Immobilization

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. Contusion, abrasion, laceration, hematoma. 2. Pain, tenderness, guarding, numbness/tingling. 3. Bruising, swelling, deformity, false/limited motion. 4. Muscle weakness/paralysis, loss of sensation. 5. Altered mental status. 6. Irregular/unstable vital signs. 7. ≠ pupils, JVD, incontinence, SQ air. 8. Pale, cool, clammy skin; delayed capillary refill.	1. PMH/Meds/Allergies. 2. Mechanism of injury/weapon description 3. Use of protective devices: helmets, seatbelts, airbags, padding. 2. Substance abuse. 3. Estimated blood loss at scene. 4. Time of injury. 5. Loss of consciousness.

PRECAUTIONS:

1. Pulse oximetry readings may be difficult to obtain in states of low perfusion.
2. Substance abuse masks the signs of injury and illness. Any patient who is unconscious, has an altered mental status, or has a head injury has the potential for a spinal injury.

EMERGENCY MEDICAL RESPONDER (EMR) CARE *If trained and authorized:*

1. If signs and symptoms of shock, keep patient warm and consider Trendelenburg Position.
2. Take spinal precautions while assessing and supporting ABCs. Assist ventilations on any patient with decreased LOC and inadequate respirations < 10 or > 30.
3. Control bleeding with direct pressure, elevation, pressure points and tourniquet when appropriate. Apply hemorrhage control agent as appropriate and available.
4. Administer high concentration oxygen.
5. Backboard patient with C-collar if patient complains of head, neck, or back pain, or if possible spinal cord injury is suggested, or if history is unreliable due to unconsciousness or altered mental status, intoxication, altered mental status, or distracting injuries.

EMERGENCY MEDICAL TECHNICIAN (EMT) CARE *If trained and authorized, in addition to above:*

1. Notify medical control immediately of any patient that meets trauma team alert criteria.

2. In extremity trauma with loss of distal pulse, prior to splinting, make one gentle attempt with traction to realign long bones to restore distal circulation. If unsuccessful, splint as indicated and notify receiving personnel about circulatory status. Do not attempt to reduce/realign injured joints.
2. Immediately begin transport to a Level 1 Trauma Center, any patient with significant airway, breathing, circulatory, or neurological compromise. **Attempt to keep scene time to 5 minutes in severe trauma, but remember that time spent at the scene, assessing and managing the patient's ABCs is time well spent**. Focused surveys, if patient is critical, should be performed enroute.
3. Initiate cardiac monitoring enroute.

ADVANCED EMT/INTERMEDIATE CARE *If trained and authorized, in addition to above:*

1. EMT with IV training - initiate large bore IV(s) in any patient exhibiting signs and symptoms of shock or who has the potential to become shocky due to known injuries or mechanism of injury. IV/IO(s) in unstable patients should be established enroute unless extrication is delayed. Do not delay rescue or extrication for IV/IO.
2. Consider fluid challenges in any adult patient with systolic BP < 90. Attempt to maintain systolic BP @ 90 – 100 mmHg. Fluid challenges are typically 20 cc/kg.

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

1. Consider ET intubation in any patient with a GCS <9 or with a compromised airway.
2. Perform chest decompression if evidence of tension pneumothorax.
3. Perform pericardiocentesis if evidence of cardiac tamponade.
4. Perform surgical airway if needed to obtain airway.
5. Consider pain medications as appropriate for isolated extremity trauma.
6. Do not delay transport for RSI. Medications should be prepared enroute and the ambulance stopped to perform the RSI/intubation.

PEDIATRIC CONSIDERATIONS:

1. In children with signs & symptoms of shock, consider fluid challenges of 20 cc/kg. IO may be the preferred route in pediatric patients < 8 with significant injuries.

SPINAL IMMOBILIZATION: Spinal immobilization is indicated in patients who have sustained an injury with a mechanism of injury having the potential for causing spinal injury (or when the mechanism of injury is unclear) and who have at least one of the following criteria:

1. Altered mental status that makes assessment of mental status difficult.
2. Evidence of intoxication or other mind-altering substance ingestion.
3. Distracting painful injury.
4. Neurologic deficit.
5. Facial or head injuries evident on exam.
6. Injuries subject to deceleration forces.
7. Spinal pain or tenderness.

Note: Situations which may impact the patient's perception and communication of pain (e.g. extremes of age < 12 or > 65) or non-English speaking or non-verbal patients.

HELMET CONSIDERATIONS: The decision to remove a helmet should be based on three factors: The ability of EMS personnel to access the patient's ABC for an evaluation and provide treatment, the status of the patient's level of consciousness and ABCs, and the existence of shoulder pads.

1. The relative position of the head and thorax must be considered when immobilizing a patient wearing helmet and shoulder pads. Patients with football shoulder pads and helmets are generally held in a neutral alignment when wearing both pieces of equipment. Patients wearing hockey or lacrosse shoulder pads are generally not neutrally aligned. Consider Removal of shoulder pads if helmet is removed.
2. The facemask should be removed regardless of ABC compromise or altered LOC.

3. The entire helmet should be removed if:
   A. The helmet and chinstrap do not hold the head securely.
   B. The design of the helmet and chinstrap is such that even after removal of the facemask, the airway cannot be assessed or managed properly.
   C. The facemask cannot be removed after a reasonable period of time.
   D. The helmet prevents immobilization for transportation in an appropriate position.
5. Patients without shoulder pads (e.g. bicycle, motorcycle, ski)
   A. Patients with helmets only: in the absence of shoulder pads, EMS personnel should remove helmets so that the spine may be properly aligned.

SPECIAL NOTES:
1. Contact Medical Control Physician if surgical field amputation may be needed.
2. Do not hyperventilate patients with head injuries unless they are actively herniating! When possible, monitor head injury patients with CO_2 monitor. The goal is a value of 35.
3. All amputated parts should be retrieved, if possible, for possible reimplantation. Wrap the part in a moist sterile dressing (DO NOT SOAK, IMMERSE OR ALLOW TO FREEZE). Place the part in a sealed plastic bag and place the bag on regular ice or cold pack. Never clamp bleeding vessels. Collect teeth and place in container of sterile normal saline. Do not delay to retrieve parts with critical patient.
4. Isolated femur fractures in all ages should be stabilized using a splint capable of applying traction.
5. Patients from minor vehicle accidents and those with wounds, lacerations, sprains or contusions who are not transported must be given the appropriate written Non-Transportation Information sheets.

END

Back to Index ↑

Exclusion of C-Spine Precautions

GENERAL CONSIDERATIONS

The National Association of Emergency Medical Service Physicians, American College of Emergency Physicians and others have gone on record in support of selecting, by protocol and assessment, those patients in the out of hospital setting who require cervical spinal immobilization from those who do not. Several studies have demonstrated that properly trained emergency medical technicians can safely and effectively select patients requiring cervical spinal immobilization. Other studies have shown that the use of ridged spine boards can actually cause further patient harm and often cause unnecessary discomfort.

Using these procedures may determine if a cervical collar will be placed on the patient and if the patient will be placed on a long spine board. If any of the components of this procedure cannot be satisfied to the satisfaction of the EMS crew, cervical spinal precautions, including the use of a cervical collar, long board and straps, will be completed.

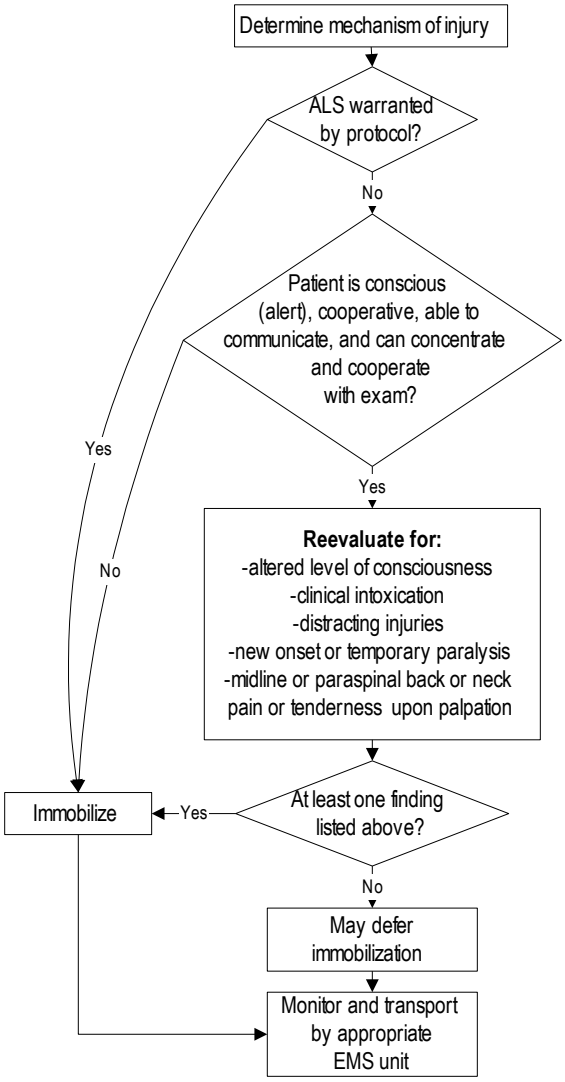
1. This procedure does not exclude any patient from cervical spinal immobilization if the EMS crew feels cervical spinal immobilization precautions are warranted.
2. If there are communications barriers including but not limited to: age, language, closed head injury, deafness, intoxication, or other injury that interferes with the patient's ability to concentrate on or cooperate with the examination (i.e. patient is distracted), etc. complete spinal immobilization will be accomplished by the EMS crew.
3. It is important to determine whether the patient is unable to concentrate on exam due to other injuries, events, or issues (i.e. patient is distracted). Other injuries may actually serve as markers for high-energy trauma that could result in multiple other significant injuries, including cervical spine injuries. Distracting injuries include, but are not limited to fractures, lacerations, burns, and more.
4. The term "Neck Pain" includes any stiffness or tenderness upon palpation at the posterior midline or paraspinal area of the cervical spine or back.

PROCEDURE

1. A complete patient assessment shall be accomplished on all trauma patients including those who are potential candidates for cervical spinal immobilization exclusion under this procedure.

2. If the patient is found to have one or more of the exclusionary elements listed below present, the EMS crew will accomplish complete spinal immobilization.
3. Documentation on the run report should reflect negative physical findings as outlined below.
4. Cervical spinal immobilization may be excluded from patients meeting all of the following criteria:
    a. The patient does not have neck pain, spinal pain or tenderness, including any neck pain with a history of trauma.
    b. The patient does not have significant multiple system trauma.
    c. The patient does not have head or facial trauma history or finding on exam.
    d. The patient does not have numbness or weakness in any extremity after trauma.
    e. The patient has not experienced a loss of consciousness caused by trauma.
    f. The patient does not have trauma along with altered mental status, including from drugs or clinical intoxication.
    g. The patient does not have a distracting injury from their trauma that may be preventing them from perceiving neck pain, spinal pain or tenderness.
    h. The patient does not have unstable vital signs.
    i. Does not have dangerous mechanism of fall more than 3 feet, more than 5 stairs, high spped MVC (> 50 MPH, Rollover, Ejection), on bicycle struck by vehicle, ATV/UTV accident.

Patients meeting all of the excluding criteria listed above may be transported in a position of comfort on a stretcher, cot, ambulance seat or using any other approved method inside of the ambulance. With careful assessment, a patient who has sustained ***minor*** blunt trauma may not require spinal immobilization.



NOTES:

1. This policy does not exclude any patient from immobilization if the EMS team feels c-spine/spinal immobilization precautions are warranted.
2. Communication barriers include, but are not limited to: age, language, closed head injury, deafness, intoxication, or other injury that interferes with patient's ability to concentrate on or cooperate with the examination (i.e. patient is distracted), etc.
3. Neck pain includes any stiffness or tenderness upon palpation at the posterior midline or paraspinal area of the cervical spine or back., or complaint of neck or back pain.
4. It is important to determine whether the patient is unable to concentrate on exam due to other injuries, events, or issues (i.e. patient is distracted). Other injuries may actually serve as markers for high-energy trauma that could result in multiple other significant injuries, including cervical spine injuries. Distracting injuries include, but are not limited to: fractures, lacerations, burns, and crush injuries.
5. Documentation on the run report should reflect negative physical findings as outlined above.

END

Back to Index ↑

Ventilator – Automatic Transport Vent

INTRODUCTION
Use of an Automatic Transport Ventilator must be appropriately documented when used. The medic must be trained in use of specific provider ventilator to be used for transport.

INDICATIONS
1. Any patient requiring ventilatory assistance in conjunction with advanced airway adjuncts.
2. Any patient requiring ventilatory assistance in conjunction with basic airway adjuncts.
3. Any patient requiring ventilatory assistance in conjunction with manual airway maintenance.

CONTRAINDICATIONS
1. Patients weighing less than 16 Kg. (35 lbs.)
2. Pneumothorax - tension pneumothorax.
3. Pulmonary over pressurization syndrome (blast injury, water ascent injury, etc.)

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*
1. Determine that a need for the use of the ATV exists.
2. Assure that all tubing is free from kinks.
3. Determine the proper tidal volume setting. This is done by determining the patient ideal weight (approx. weight for any physically fit patient having the same sex, height, and frame) and multiplying it by 8-10 ml./kg. Begin with the lowest tidal volume limit.
4. Set Breaths per Minute (bpm) control to rate of 8-15 per minute.
5. Check alarm by occluding the patient valve assembly outlet. The audible pressure limit alarm should sound as the ventilator cycles through the delivery phase.
6. Assess lung compliance and chest rise with a bag valve device. Tidal volume may be adjusted lower if poor lung compliance is found.
7. Attach the patient valve assembly to the airway device or mask used on the patient.
8. Assess the ventilation. Listen for bilateral lung sounds. Observe for proper chest rise . . . this should look normal and be symmetrical.
9. Count the number of complete ventilator cycles for a full minute. The number should be the same as the setting (+/-1).
10. Assess and manage the airway as you normally would for any patient with controlled ventilation.
11. If spontaneous breathing begins, it may be desirable to turn the BPM down as long as patient's spontaneous rate is 10-12 per minute.
12. Check oxygen cylinder pressure level frequently. This device will deplete a "D" cylinder rapidly.

SPECIAL CONSIDERATIONS
1. Due to COPD, chest rise may not appear full . . . do not increase tidal volume (TV) past upper TV limit.
2. If lung sounds are absent or on one side only: rule out airway obstruction, improper tube placement, or pneumothorax, and check tidal volume ml/bpm settings.
3. If chest expansion is not adequate, the rescuer should slowly increase tidal volume until chest expansion is adequate, or the uppermost limit (for the patient's ideal weight) is reached.
4. If chest appears to over expand, decrease tidal volume.
5. Ensure ET tube is properly placed
6. Use DOPE pneumonic to troubleshoot problems
   D = Dislodgment
   O = Obstruction
   P = Pneumothorax
   E = Equipment failure

END

Back to Index ↑

Vertigo

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. Dizziness, spinning, falling, nausea, vomiting, ataxia, and falls (with or without injury). Provoked by turning or moving their head.	1. PMH/Meds/Allergies. 2. Substance abuse. 3. Exposure to known allergen. 4. History of CVA/TIA.

EMR/EMT CARE *If trained and authorized in addition to above:*

1. Provide oxygen as necessary.
2. Allow the patient to assume the position that minimizes or eliminates the symptoms – usually the supine position.
3. Beware that asking the patient to turn their head or sit up, or testing the movement of their extraocular muscles can trigger vertigo and result in vomiting. Try to avoid these unnecessary movements.

AEMT/INTERMEDIATE CARE *If trained and authorized in addition to above:*

1. Establish a IV of NS @ TKO.
2. If the patient appears to be dehydrated, consider a 500 ml bolus of Normal Saline.

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

1. Use the following medication for treatment of nausea and vomiting associated with vertigo:
   a. **Check for allergies, or history of Akathisia** *(an extreme form of internal or external restlessness)* or **Dystonia** (*a muscle tension disorder involving very strong muscle contractions*.)
   b. **Zofran** 2-4 mg IV over 1 minute, or
   c. **Reglan** 10 mg IV over 1-2 minutes or 10 – 20 mg IM
2. Use the following medication to reduce vertigo:
   a. **Valium** 5 mg IV

SPECIAL NOTES:
Notify medical control if extrapyramidal side effects develop from the Reglan. These include:
Initial symptoms include restlessness, agitation, malaise, or a fixed stare. Then comes the more characteristically described extreme and sustained upward deviation of the eyes. In addition, the eyes may converge, deviate upward and laterally, or deviate downward. The most frequently reported associated findings are backwards and lateral flexion of the neck, widely opened mouth, tongue protrusion, and ocular pain.

Consider Benadryl 25 mg IM or IV to correct extrapyramidal side effects.

END

Back to Index ↑

Obstetrical Deliver & Emergencies

Obstetrical Deliver

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. Regular abdominal pain, cramping, or contractions. 2. Bloody show, passage of clots or tissue. 3. Perineal bulging, crowning. 4. Amniotic sac rupture. 5. Contraction intensity and length. 6. Urge to push or have bowel movement. 7. Involuntary screaming. 8. Lower back pain.	1. Prenatal care, known complications 2. Symptom onset & time between contractions 3. Presence of meconium when "water broke" 4. PMH/Meds/Allergies 5. Amount of bleeding 6. Last menstrual period 7. Anticipated due date 8. Gravida (number of pregnancies) 9. PARA (number of delivered viable infants)

PRECAUTIONS:

1. Take appropriate infection control precautions.
2. Early notification of medical control is essential for known or suspected complications so that receiving facility can be appropriately selected and notified.

EMERGENCY MEDICAL RESPONDER (EMR) CARE *If trained and authorized:*

1. Administer 100% oxygen if any complications are known or suspected.
2. Assess length of contraction, measuring from beginning to end of contraction.
3. Assess time between contractions, measuring from beginning of one to beginning of the next.
4. Place patient in position of comfort and reassure. Do not lay patient on her back.
5. During a contraction, assess for perineal bulging, crowning, and prolapsed cord.
6. If delivery is imminent, open OB kit, prepare for delivery and newborn resuscitation.
7. Suction infant's mouth, then nose, as soon as head appears on the perineum. Re-suction mouth then nose immediately upon delivery.
8. Note delivery time. Keep infant at placental level until cord is cut.
9. Immediately stimulate respirations by tapping feet while drying and wrapping infant with a dry blanket. Cover infant's head ASAP.
10. Assess and record one minute APGAR.
11. Apply cord clamps once it stops pulsating. Double clamp cord at 6" and 8" from infant and cut cord.
12. Episiotomy is contraindicated in field. Control bleeding from perineal tears with direct pressure.
13. Assess and record five minute APGAR.
14. Assist in the delivery of placenta and retain in plastic bag.

EMERGENCY MEDICAL TECHNICIAN (EMT) CARE *If trained and authorized, in addition to above:*

1. Massage uterus downward while supporting uterus just above the symphysis pubis to stimulate contractions and control postpartum bleeding. Allow nursing if desired.

ADVANCED EMT/INTERMEDIATE CARE *If trained and authorized, in addition to above:*

1. Establish large bore IV of NS and administer 500-1,000 cc fluid challenge in any woman with excessive prenatal or postpartum bleeding.

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

1. Support neonate with intubation as indicated. In the presence of thick meconium with an infant with a decreased LOC, ET intubation with meconium aspirator may be the best way to clear the airway before stimulating neonate.

NEONATAL RESUSCITATION:

1. Stimulate and dry patient.
2. Evaluate respirations
   A. Spontaneous: Evaluate heart rate
   B. None or gasping: Ventilate @ 40-60 breaths per minute with BVM with pop-off valve with 100% oxygen
3. Apply ECG, monitor SPO2 and EKG.

4. Evaluate heart rate (HR)
   A. Above 100: Evaluate color.
   B. 60 - 100/min: Continue with PPV and 100% oxygen.
   C. < 60/min: CPR with hands wrapped around chest and using two overlapped thumbs placed on the middle of the sternum.
   D. Consider intubation, coordinate as not to interrupt compressions.
   E. ALS: Administer 0.01mg/kg epinephrine 1:10,000 IO/IV if HR < 60/min after 30 seconds of CPR.
   F. Reevaluate every 30 seconds for response to treatment.
5. Evaluate color
   A. If blue centrally: Administer oxygen by blowby. Reevaluate every 30 seconds to see if oxygen flow can be reduced.
   B. If pink or peripheral cyanosis: Observe & monitor
6. If 5 minute APGAR is < 8:
   A. Evaluate blood sugar (BS) with heel stick. Normal BS range is 50 - 80 mg/dL for newborns. Consult with MD if BS < 50 mg/dL regarding administration of $D_{10}W$.
   B. Consult with Medical Control Physician regarding the administration of Naloxone.

SPECIAL NOTES:

1. Document mother and child on separate run reports.
2. United Hospital is the only East Metro Hospital equipped to accept patients between 20-32 weeks gestation who are in active labor. Special requests for transporting patients in active labor (28-32 weeks) to St. John's Hospital must be facilitated through MRCC.
3. If mother has serious hemorrhage or signs and symptoms of serious shock, transport to the nearest hospital (trauma patients should be transported to a Level 1 Trauma Center). If emergency arrangements have been made at the receiving hospital and EMS provider is comfortable with extended travel time, transport patient to the hospital that is expecting the patient.

END

Back to Index ↑

Abruptio Placentae

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. Vaginal bleeding 2. Contractions 3. Severe tearing sensation 4. Firm and tender abdomen 5. S & S of shock 6. S & S of fetal distress including ↓ movement 7. Ruptured membranes	1. Trauma 2. Assault/abuse 3. Prenatal care 4. Hx of placenta previa 5. Hypertension 6. Cocaine, tobacco or alcohol use 7. Amount and color of blood and if clots present 8. Mother's last note of fetal movement

PRECAUTIONS:

1. External vaginal bleeding is not always visible.

EMERGENCY MEDICAL RESPONDER (EMR) CARE *If trained and authorized:*

1. Maintain universal blood and body substance precautions.
2. Ensure open airway and adequate ventilations – Apply high flow oxygen.
3. Treat for shock - Keep patient warm.
4. Place in left lateral recumbent position.
5. Monitor vital signs at least every 5 minutes.

EMERGENCY MEDICAL TECHNICIAN (EMT) CARE *If trained and authorized, in addition to above:*

1. Refer to above as appropriate.

ADVANCED EMT/INTERMEDIATE CARE *If trained and authorized, in addition to above:*

1. Start large bore IV(s) and if S&S of shock infuse 500 – 1000 cc N.S.

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

1. Refer to above as appropriate

END

Back to Index ↑

Breech Delivery

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. Labor. 2. Presentation without hair. 3. Buttock, arm or feet visible. 4. Pulsating presentation part.	1. Pregnancy/Prenatal care. Due Date. 2. Possibility of multiple births 3. Previous breech deliveries or OB 4. Complications. 5. Pelvic tumors. 6. Drug or alcohol use. 7. Past trauma.

PRECAUTIONS:

1. If the umbilical cord is compressed and the infant is in distress, the provider can cause birth trauma by attempting to deliver the infant too rapidly.

EMERGENCY MEDICAL RESPONDER (EMR) CARE *If trained and authorized:*

1. Maintain universal blood and body substance precautions
2. If delivery is imminent, position mother for delivery, prepare a clean field, allow delivery up to the level of the umbilicus and if in the front position extract the legs downward after the buttocks is delivered, support the baby's body with the palm of the hand and forearm, gently extract a 4"-6" loop of umbilical cord to allow delivery, gently rotate the baby to align the shoulders in an anterior-posterior position and deliver the shoulders, avoid excessive head and spine movement or traction when the head is delivered; if the head does not deliver, place a gloved hand into the vagina with palm towards the baby's face and form a "V" on either side of the baby's nose making a space for air to enter. Place mother on high flow oxygen.
3. After Birth, follow guidelines for newborn infant:
    A. Be prepared to suction and support infants airway and ventilations
    B. Warm and dry infant
    C. Treat mother for hemorrhage.

EMERGENCY MEDICAL TECHNICIAN (EMT) CARE *If trained and authorized, in addition to above:*

1. Identify the need for imminent delivery or need for immediate transportation:
    A. If delivery is not imminent, transport patient to hospital of choice. Place mother in left lateral recumbent position.
    B. If delivery is imminent but not possible, transport the mother to the nearest hospital with surgery facilities or where emergent plans have been prepared for her care.

ADVANCED EMT/INTERMEDIATE CARE *If trained and authorized, in addition to above:*

1. Start IV of NS T.K.O.

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

1. Monitor EKG.
2. Contact Medical Control Physician for pain management.

SPECIAL NOTES:

1. Inform the hospital as soon as possible of your patient so they can prepare for their arrival.
2. APGAR scores are typically lower, especially at 1 minute, after a breech delivery.
3. Breech delivery is higher chance at 21-28 weeks of gestation, low birth weight is a concern for baby.
4. Intracranial hemorrhage, injury to the spinal cord, liver, adrenals and spleen are possible during a breech delivery.

END

Back to Index ↑

Cord Prolapse

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. Labor 2. Rupture of membranes 3. Pulsating presenting part	1. Pregnancy/Prenatal care & Due Date 2. Possibility of multiple births 3. Rupture of membranes 4. Drug or alcohol use

PRECAUTIONS:

1. 47% of cord prolapse occurs within five minutes of rupture of amniotic sack. This is a life-threatening complication that requires emergency cesarean birth to save the life of baby.

EMERGENCY MEDICAL RESPONDER (EMR) CARE *If trained and authorized:*

1. Place mother into knee-chest position, with buttocks elevated as high as possible.
2. Insert gloved hand into vagina and lift the presenting part off the cord.
3. Do not remove hand until arrival at the hospital. Take care to not compress the cord.
4. Give mother 100% oxygen via non-rebreather.
5. Do not allow mother to stand up or lay on her back.
6. Keep mother warm and ensure privacy.

EMERGENCY MEDICAL TECHNICIAN (EMT) CARE *If trained and authorized, in addition to above:*

1. Transport emergently to closest hospital.

ADVANCED EMT/INTERMEDIATE CARE *If trained and authorized, in addition to above:*

1. Start large bore IV with NS.

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

1. Refer to above as appropriate

SPECIAL NOTES:

1. Notify receiving hospital as soon as possible so they can prepare their OR team.

END

Back to Index ↑

Meconium Aspiration Syndrome

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. Viscous, dark green substance present 2. Cyanosis 3. End-expiratory grunting 4. Nasal flaring 5. Intercostal/sternal retractions 6. Tachypnea 7. Barrel Chest in the presence of air trapping 8. Newborn with green urine	1. Placental distress 2. Maternal hypertension 3. Pre-eclampsia 4. Low fluid-amniotic sac 5. Maternal drug abuse 6. At least 34 weeks gestation

PRECAUTIONS:

1. Aspiration of meconium-stained amniotic fluid can cause several complications; hypoxia is of the most concern for the EMS provider.

EMERGENCY MEDICAL RESPONDER (EMR) CARE *If trained and authorized:*

1. Upon delivery of the newborns head on the perineum, carefully suction the mouth and then the nose.
2. Initiate resuscitation: dry, stimulate, ensure open airway, ventilate and apply oxygen as needed.
3. Maintain newborn body heat
4. DO NOT perform harmful techniques like squeezing the chest, inserting a finger into the mouth of the baby or externally occluding the airway of the baby.
5. If the baby is vigorous even with the presence of meconium, clear secretions from the mouth then nose with a bulb syringe and initiate resuscitation: dry, stimulate, ensure open airway, ventilate and apply oxygen as needed.

EMERGENCY MEDICAL TECHNICIAN (EMT) CARE *If trained and authorized, in addition to above:*

1. Refer to above as appropriate.

ADVANCED EMT CARE *If trained and authorized, in addition to above:*

1. Refer to above as appropriate.

INTERMEDIATE CARE *If trained and authorized, in addition to above:*

1. Refer to above as appropriate.

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

1. If the baby is depressed upon delivery and there is presence of thick meconium, intubate and suction the trachea (not longer than 5 seconds) to retrieve meconium. Suction before stimulation of baby. Repeat suction as necessary. Provide blow-by oxygen when suctioning. If bradycardia is present, bag-valve mask the infant and assess for the need to begin CPR.

SPECIAL NOTES:

1. Meconium in the amniotic fluid can be detected in 8-20% of all births after 34 weeks gestation. 1-9% may develop Meconium Aspiration Syndrome.

END

Back to Index ↑

Placenta Previa

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. Painless vaginal bleeding during the 2nd or 3rd trimester. 2. Signs and symptoms of shock.	1. Painless vaginal bleeding during the 2nd & 3rd trimester. 2. Past C-section delivery. 3. Placenta Previa in current or past deliveries. 4. Time and amount of bleeding. 5. Color of blood and any clots present. 6. Prenatal care.

PRECAUTIONS:

1. As a general rule, cases of painless vaginal bleeding in the 2nd or 3rd trimester should be considered placenta previa.
2. Placenta can create a blockage to prevent blood from entering the vagina. Subsequently uterus can fill with free blood without vaginal bleeding.

EMERGENCY MEDICAL RESPONDER (EMR) CARE *If trained and authorized:*

1. Maintain universal blood and body substance precautions
2. Administer high flow oxygen
3. Keep patient warm
4. Place patient in left lateral recumbent position
5. Monitor vital signs at least every 5 minutes

EMERGENCY MEDICAL TECHNICIAN (EMT) CARE *If trained and authorized, in addition to above:*

1. Refer to above as appropriate.

ADVANCED EMT/INTERMEDIATE CARE *If trained and authorized, in addition to above:*

1. Start large bore IV (s) and if symptomatic, infuse 500-1000 ml of normal saline and recheck vital signs.
2. EKG Monitor.

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

1. Refer to above as appropriate.

END

Back to Index ↑

Postpartum Hemorrhage

SIGNS & SYMPTOMS:	OBTAIN HISTORY OF:
1. Blood loss > 500 ml after vaginal delivery. 2. Birth trauma to genital tract. 3. Weakness. 4. Signs and Symptoms of shock.	1. Delivery date and time. 2. Estimate of blood loss. 3. Delivery of intact placenta. 4. Postpartum hemorrhage in past deliveries. 5. Multiple fetuses. 6. Prolonged labor.

PRECAUTIONS:

1. Estimates of blood loss at delivery are subjective and generally inaccurate. The volume of a clot represents ½ the volume of blood used to form the clot.

EMERGENCY MEDICAL RESPONDER (EMR) CARE *If trained and authorized:*

1. Administer high flow oxygen.
2. Keep patient warm.
3. Raise the patient's legs.
4. Massage fundus towards feet with support on lower uterus just above symphysis pubis.
5. Allow infant to nurse.
6. Monitor vital signs at least every 5 minutes.
7. Apply large dressing and direct pressure to stop external bleeding.

EMERGENCY MEDICAL TECHNICIAN (EMT) CARE *If trained and authorized, in addition to above:*

1. For external tears, consider the use of a hemorrhage control agent.

ADVANCED EMT/INTERMEDIATE CARE *If trained and authorized, in addition to above:*

1. Start 1-2 large bore IV (s).
2. Infuse 500-1000 cc of normal saline and recheck vital signs

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

1. Refer to above as appropriate.

SPECIAL NOTES:

1. Usually caused by a failure of the uterus to contract and retract following delivery.

END

Back to Index ↑

Pre-Eclampsia/Eclampsia

SIGNS & SYMPTOMS (with pregnancy):	OBTAIN HISTORY OF:
1. Headache. 3. Edema. 4. Visual disturbances. 5. Upper right quadrant/ epigastric pain. 6. Decrease in urinary output. 7. Seizure. 8. Unresponsiveness. 9. BP greater than 140-90 /p 20th week of pregnancy.	1. Pregnancy. 2. Hypertension. 3. Renal disease. 4. Past and family history of pre-eclampsia/eclampsia. 5. Recent past seizure activity.

EMERGENCY MEDICAL RESPONDER (EMR) CARE *If trained and authorized:*

1. Maintain an open airway and adequate ventilations, apply oxygen to ensure SaO_2 greater than 95%.
2. Monitor vital signs every 5 minutes
3. Protect against maternal injury during seizure activity

EMERGENCY MEDICAL TECHNICIAN (EMT) CARE *If trained and authorized, in addition to above:*

1. Do not delay transport
2. Place patient on stretcher in *Left Lateral Recumbent Position*
3. Decrease external stimulation as much as possible (lower lights and RLS only in emergencies)

ADVANCED EMT/INTERMEDIATE CARE *If trained and authorized, in addition to above:*

1. Establish IV TKO.

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

ECLAMPSIA:

1. 4g magnesium sulfate IV/IO over 20 minutes (buretrol recommended) or 5g IM in each buttock (10g total) to decrease or prevent further seizure activity.
2. Contract Medical Control Physician for further orders.

SPECIAL NOTES:

1. Usually occurs during third trimester of pregnancy or within 48 hours after birth. Cases have happened before 20 weeks gestation and as late as 23 days after delivery.
2. Eclampsia is defined as seizure activity or coma unrelated to other cerebral conditions in an O.B. with preeclampsia. Eclampsia should be considered in all pregnant patients with altered level of consciousness.
3. In the U.S., approximately 15% of pregnancies are complicated by preeclampsia and 0.5-2% progress to eclampsia.
4. No definite cause has been identified; however, genetic, immunologic, endocrinologic, nutritional, and infectious agents have been proposed as possible causes.
5. Preeclampsia/eclampsia creates a functional derangement of multiple organ systems including the central nervous system, hematologic, hepatic, renal and cardiovascular system.

END

Back to Index ↑

Guidelines Specific to Interfacility Specialty Care Transports

Paramedics and Registered Nurses who have completed additional training in one of the Wisconsin approved Critical Care Paramedic courses for inter-facility transports managing patients with the following guidelines as approved by the Baldwin Area EMS Medical Director.

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

TRANSFER OF PATIENTS WITH ARTERIAL LINES

1. Prior to moving a patient to the ambulance stretcher, the following must be completed:
   A. The paramedic will have a R.N. check all connections and confirm that they are tight.
   B. The paramedic will assess circulation in the extremity and document the color, pulse intensity, capillary refill, and sensation.
   C. The paramedic will inspect the puncture site, noting any swelling or bruising.
   D. The paramedic will examine the pressure bag to assure it is working properly.

2. During the transfer, the paramedic will:
   A. Check all connections every 30 minutes and document the findings
   B. Check circulation in the extremity as in II.B. every 30 minutes and document the findings
   C. Check the puncture site every 30 minutes and document.
   D. Maintain 300 mmHg of pressure at all times in the pressure bag for adults. (For pediatrics, request pressure limit from RN or physician.)

3. If blood backs up into the line:
   A. Check the position of all stopcocks.
   B. Check all connections.
   C. Check the bag pressure to assure 300 mmHg of pressure (adults).
   D. Flush the catheter using the fast flush valve (valve with white plastic hand) until the line is cleared.
   E. Do not allow the valve to remain open causing the patient to receive too much fluid.
   F. Do not flush with a syringe.
   G. Do not allow blood to back up to transducer dome. If it does, notify the receiving hospital upon arrival.

4. Should an assessment reveal a loss or weakening of pulse distal to the site or a loss of warmth, sensation or mobility below the site, notify the receiving hospital immediately.

5. Apply direct pressure to the site should the catheter become dislodged or if you note a hematoma forming.

6. Should an air embolism be suspected due to an empty IV container, air in the tubing or loose connections as evidenced by a decrease in blood pressure, weakness, rapid pulse, or cyanosis of the affected extremity:
   A. Check the line for leaks.
   B. Notify the receiving hospital or medical control immediately.
   C. Check vital signs.
   D. Administer O2 as ordered.
   E. Provide care as ordered.

7. If air bubbles appear in the line:
   1. Check for leaks and loose connections in the line
   2. Flush air through an open stopcock

8. Notify the receiving hospital of any complications encountered during transport

END

Back to Index ↑

EMERGENCY USE OF CENTRAL VENOUS ACCESS DEVICES (CVADs)

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

Purpose: Previously established central lines and other access ports may be utilized during an emergency in the event that a peripheral IV line cannot be established.

Emergency situations include:

1. Cardiac arrest
2. Major trauma
3. Life-threatening situation requiring immediate need for medication or fluid therapy

Important information

1. **Heparinized lines**
   A. Some CVADs utilize a heparin flush to maintain line patency.
   B. Heparin is not compatible with many drugs, therefore it is important to flush the line with normal saline before and after medication administration.
   C. Dialysis catheters or other access devices that have been heparinized should be aspirated to remove the 3 cc of Heparin prior to flushing the line. In a dire emergency, if you cannot aspirate, you may proceed with flushing the line.
   D. In the prehospital setting we will not "re-lock" the line with Heparin after access. Therefore, a continuous Normal Saline IV will be established using the CVAD to maintain patency.
2. **Risks**
   There is a risk of air embolism when a central IV system is open to the air. To help eliminate this risk:
   A. Use a needle to access through the injection port cap (or utilize needless access system if available) for medication administration.
   B. Clamp the line whenever you remove the injection port cap to attach or disconnect a syringe or IV fluids.
3. **Risk of Infection:**
   A. Good aseptic technique must be utilized to help prevent risk of infection.
   B. Preferred method would be to utilize sterile technique when possible.
   C. Use a 5 - 12 cc syringe when aspirating from or flushing the line. Smaller syringes have greater pressure and could force a clot through the line or even rupture the line.
   D. Following is a table outlining the various types of access devices and related information:

END

Back to Index ↑

CENTRAL VENOUS CATHETER – QUICK REFERENCE CHART

CATHETER	DESCRIPTION	MED ADM. - LINE FLUSHING	MISCELLANEOUS
Percutaneous CVC Multiple lumen catheter	A silicone catheter Inserted percutaneously into the subclavian or internal jugular vein.	Flush with 3 cc NS before and after infusing medications. OR resume continuous fluids.	All lumens can be used to deliver medications or IV fluid.
Single lumen catheter	2-5 inches in length, inserted into the subclavian or internal jugular vein.	Flush with 3 cc NS before and after infusing medications OR resume continuous fluids.	
Tunneled CVAD Hickman catheter	A surgically inserted catheter which is tunneled under subcutaneous tissue into the central venous system. Can be single or double lumen. Has dacron cuff.	Flush with 3cc NS before and after medications OR resume continuous fluid.	
Broviac catheter	Similar to Hickman. Frequently used in children	Flush with 3cc NS before and after medications OR resume continuous fluids.	
Groshong catheter	Similar to Hickman. Tip of catheter has a pressure sensitive valve.	Flush with 10cc NS before and after medications OR resume continuous fluids.	Flush briskly to maintain valve integrity.
Implanted Ports Port A Cath Or Infus A Port	The device is placed surgically under subcutaneous tissue with a tunneled catheter that extends into the central venous system.	Flush with 10cc NS before medications. Check for blood return before instilling fluids/medications. Flush with 20cc NS after medications Or resume continuous fluids.	Must use a "Gripper" needle and extension set or another type of "non-coring" needle specified for the port.
Peripheral Central Catheter P.I.C.C. catheters	Small silicone catheter Inserted percutaneously into the basilic or cephalic vein in the antecubital space. Advanced until it rests in the central venous system.	Flush with 10cc NS before and after medications Or resume continuous fluids.	Use 10-12 cc Syringes. Do not use vacutainers.
Dialysis Catheter Ash Catheter tunneled Quinton catheter temporary	The Ash catheter – same as Broviac; 2 tailed straight. Quinton is a non-tunneled, non-cuffed 2 tailed curved catheter inserted into the central venous system. Always sutured in place.	Aspirate 3 cc blood to remove heparin. Flush with 10cc NS before and after Medications. Or resume continuous fluids. Maintain the fluids at a KVO rate so as not to overload the dialysis patient with fluid.	In an emergency, if you cannot aspirate the 3 cc of heparin, it is OK to flush.

Documentation

1. Document procedure on PCR form as with any other procedure. Include type of CVAD, authorization for access, time and what you administered through the line.

END

Back to Index ↑

Back to Index ↑

Medication Maintenance

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

1. Maintain oxygen flow rate for an oxygen saturation of greater than or equal to 92%.
2. Attach cardiac monitor.
3. Assess and record vital signs, to include temperature, prior to transfer and every 5 to 10 minutes enroute.
4. Reassess patient frequently during transport and document findings.
5. Collect all transfer documentation: transfer sheet, EKG's, lab, other pertinent information.
6. Contact the online medical director (medical control), document indication and order for drug during transport.
7. Document dose and route at beginning of transport and patient response.
8. For the transport medication, be familiar with the signs, symptoms and treatment of any major adverse drug reactions. Contact medical control if any signs or symptoms appear. See medications section for more information.
9. Continue administration of medications initiated in the emergency department such as antibiotics, steroids, ACLS drugs, vitamins, non-OB magnesium, fractionated heparin, etc. via subcutaneous, intramuscular, intraosseous, and/or intravenous (peripheral or central) routes. Contact medical control Physician with questions or concerns.

END

Back to Index ↑

Back to Index ↑

Procedures And Equipment

Blood Glucose Monitoring

ACTION:

1. Determine patient's blood sugar level

INDICATIONS:

1. Suspected diabetic emergencies.
2. Coma of unknown etiology.
3. Status epilepticus of unknown etiology.
4. Syncope, stroke, or seizures with focal deficit.
5. Altered mental status.

CONTRAINDICATIONS/PRECAUTIONS

1. None

ADVERSE EFFECTS:

1. None

PROCEDURE:

1. Do not push a button to turn on! The only button on our machine is for memory, pushing it will delay the testing process! Inserting the test strip activates the machine.
2. Insert test strip into instrument. The number which appears should match the bottle the strip came from. If it does not, use the button to change the number to match the bottle.
3. WAIT for the picture of a blood drop to flash before sucking blood into the test strip.
4. Select a suitable site (generally the dependent side of the or digit of either hand).
5. Clean the site with an alcohol wipe.
6. Wipe the site with a sterile dry 2 x 2 gauze pad. Allow to dry thoroughly before puncture!
7. Puncture the site with a lancet.
8. Place lancet into a biohazard sharps container.
9. Gently squeeze the finger to produce a drop of blood.
10. Wipe the first drop of blood away with a 2 x 2 gauze pad.
11. Repeat procedure to produce second drop of blood.
12. Allow the drop of blood to be sucked into the test strip.

13. Place a 2 x 2 gauze pad or band-aid over site.
14. Record result that is displayed on the instrument.

SPECIAL NOTES:

1. If the patient is dehydrated or has poor circulation to extremities, then the results may be inaccurate.
2. Blood from the IV cathether/needle may also be used for a blood sample after an IV start.

END

Back to Index ↑

CombiTube®

INDICATIONS:

1. Adults in respiratory or cardiac arrest
2. Combitube is intended for pts > 5ft.

CONTRAINDICTIONS:

1. Intact gag reflex
2. Pts < 5 ft (Combitube)
3. Known esophageal disease
4. Caustic substance (acid or lye) ingestion

PRECAUTIONS:

1. May be used in trauma, but take care to prevent neck movement.
2. In arrested pt needing defibrillation, defibrillation takes priority over Combitube insertions.

INSERTION PROCEDURES (with differences noted**):**

1. Pre-oxygenate for 2 – 3 min. prior to inserting Combitube.
2. Assemble as follows (syringes pre-drawn to approx vol's):
    a. Combitube: Large syringe to blue cuff #1 (100cc); small syringe to white cuff #2 (15cc).
1. Test cuffs, deflate balloon, leave syringes attached to speed insertion.
2. Attach mask elbow (fluid deflector) to shorter (#2) white tube.
3. Lubricate tube tip and pharyngeal balloon well with water-soluble gel.
4. Place head in neutral position. Grasp lower jaw & tongue.
5. Insert GENTLY using a curving motion. Advance until upper teeth or gums are aligned between 2 black rings:
    a. Do not force. If resistance is met, withdraw, reposition the head and reattempt.
    b. If unable to place in 30 sec., Pre-oxygenate for 1 – 2 min. and reattempt.
    c. Limit insertion attempts to 2 unless otherwise directed by Medical Control.
6. Inflate pharyngeal balloon (blue #1 cuff) with 100 cc of air for Combitube.
7. Inflate distal balloon (white #2 cuff) with 15 cc of air for Combitube.
8. Begin ventilating through longer blue tube (#1).
9. Assess placement by:
10. Listening over the epigastrum for air gurgling in stomach.
11. Observe for chest rise and fall.
12. Listening for bilateral lung sounds (midaxillary).

13. Bilateral LS. Absent stomach sounds and good chest rise indicate esophageal placement. Continue ventilating with 100 % oxygen through #1 tube.
14. If chest rise and LS are absent, and/or if air is heard gurgling in the stomach, remove mask elbow. Attempt ventilation in #2 tube and reassess as above.
15. Bilateral LS, no stomach sounds and good chest rise while ventilating though #2 tube indicates tracheal placement.
16. Additional adjuncts may be helpful in determining tube placement:
    a. SaO2: low readings may indicate ineffective vent.
    b. Decreased readings may indicate incorrect ventilation port.
    c. Direct visualization with laryngoscope.
17. Remove Combitube if tube placement cannot be determined.
18. Once tube placement is confirmed, secure tube with tape or tube restraint.
19. Pre-oxygenate for 2 – 3 min., then once q. 5 sec. Switch to ATV when convenient.
20. If placement in esophagus, #2 tube should be used to relieve gastric distention:
    a. Remove mask elbow and insert stomach catheter into #2 tube, advancing to 1st black line. If no relief, insert to 2nd black line.
    b. Stomach catheter may be connected to LOW suction for several min. Continuous suction should not be used.

REMOVAL PROCEDURE:

1. Have suction equipment ready.
2. Log roll pt on side.
3. Deflate pharyngeal cuff using #1 (blue) pilot balloon.
4. Deflate distal cuff using #2 (white) pilot balloon.
5. Gently remove Combitube while suctioning.

SPECIAL NOTES:

1. Absent LS and absent stomach sounds may result from advancing Combitube too deep into airway. If this occurs, deflate #1 pilot (pharyngeal) balloon. Pull Combitube approximately 2-3 cm out of pt's mouth and re-inflate pharyngeal balloon. If auscultation of breath sounds is now positive, and auscultation of gastric sounds is negative, continue ventilating. It is normal for the Combitube to rise slightly out of mouth as pharyngeal balloon is inflated. Do not prevent tube from rising. Remove if appropriate port cannot be determined or if ventilation becomes more difficult after insertion.
2. Combitube may be used with demand valve, BVM or ATV.
3. Leave Combitube in place if pt pronounced dead in field.
4. Bring large syringe into ER to facilitate pharyngeal balloon decompression.
5. Cardiac Arrest/Advanced Procedures Data Collection Form must be filled out any time a Combitube attempt is made. MD or anesthetist signature required anytime pt is transported to hospital with Combitube in place.
6. Combitube must be stored in its original container to maintain proper shape and ensure all components are present.

ADVANCED PROCEDURES:

1. If trained and authorized, endotracheal intubation should be attempted twice before Combitube insertion.
2. If Combitube is placed in the esophagus, make one attempt at endotracheal intubation by deflating the pharyngeal (blue) balloon, moving it to the left, and inserting laryngoscope.
3. An MD or anesthetist can also do this procedure in the Emergency Room.

If the Combitube is in the trachea, an endotracheal tube exchange device can be inserted in the shorter (white) port.

END

Back to Index ↑

King LTS-D Non-visualized Advanced Airway

Non-visualized airway placement to establish control of the patient's airway may be performed by any licensed EMT affiliated with a licensed ambulance service provider approved to use a non-visualized advanced airway protocol.

ALS: Insertion of an Endotracheal Tube is preferred (3 attempts by a licensed ALS provider). King airway will be considered our backup airway
BLS: The King LTS-D will be used by all BLS providers.

1. INDICATIONS:

A. Cardiac arrest from any cause
B. Respiratory arrest with no gag reflex
C. Unconscious patient with inadequate respiration and no gag reflex
D. The KING LT(S)-D is 100% latex-free

2. CONTRAINDICATIONS: DO NOT use on patient if....

A. Patient has an active gag reflex
B. Patient has known or suspected esophageal disease
C. Patient has history of ingesting a caustic substance
D. Patient has known or suspected foreign body obstruction of the larynx or trachea

3. WARNINGS/PRECAUTIONS:

A. Is not proven to protect the airway from the effects of regurgitation and aspiration.
B. High airway pressures may divert gas to the atmosphere.
C. Intubation of the trachea cannot be ruled out as a potential complication of the insertion of the KING LT(S)-D.
D. After placement, perform standard checks for breath sounds and utilize an appropriate carbon dioxide monitor.

4. PREPARE FOR INSERTION OF THE NON-VISUALIZED AIRWAY

A. Maintain ventilation with an oropharyngeal airway and bag-valve-mask
B. Take appropriate body substance isolation precautions
C. Determine and select appropriate airway for size of patient
    1. Pediatric sizes are based on the patient's height or weight and adult sizes are based on the patient's height.
    2. Size 2: 35-45 inches in height or 12-25 kg in weight;
    3. Size 2.5: 41-51 inches (105-130 cm) in height or 25-35 kg in weight;

4. Size 3: 4 to 5 ft (122-155 cm);
5. Size 4: 5 to 6 ft (155-180 cm);
6. Size 5: > 6 ft (>180 cm).

5. AIRWAY INSERTION:

A. Test cuff inflation system by injecting the maximum recommended volume of air into the cuffs (refer to Sizing Information chart). Remove all air from cuffs prior to insertion.
B. Apply a water-based lubricant to the beveled distal tip and posterior aspect of the tube, taking care to avoid introduction of lubricant in or near the ventilatory openings.
C. Have a spare KING LT(S)-D ready and prepared for immediate use.
D. Pre-oxygenate.
E. For EMS Applications: Ensure gag reflex is not intact.
F. Position the head. The ideal head position for insertion of the KING LT(S)-D is the "sniffing position". However, the angle and shortness of the tube also allows it to be inserted with the head in a neutral position.
G. Hold the KING LT(S)-D at the connector with dominant hand. With non-dominant hand, hold mouth open and apply chin lift unless contraindicated by C-spine precautions or patient position.
H. With the KING LT(S)-D rotated laterally 45-90º such that the blue orientation line is touching the corner of the mouth, introduce tip into mouth and advance behind base of tongue. Never force the tube into position.
I. As tube tip passes under tongue, rotate tube back to midline (blue orientation line faces chin).
J. Without exerting excessive force, advance KING LT(S)-D until base of connector aligns with teeth or gums.
K. Fully inflate cuffs using the maximum volume of the syringe included in the EMS kit. For KING LT(S)-D typical inflation volumes see Sizing Information chart.
L. Attach the breathing circuit or resuscitator bag to the 15 mm connector of the KING LT(S)-D.
M. While gently bagging the patient to assess ventilation, simultaneously withdraw the airway until ventilation is easy and free flowing (large tidal volume with minimal airway pressure).
N. Depth markings are provided at the proximal end of the KING LT(S)-D which refers to the distance from the distal ventilatory openings. When properly placed with the distal tip and cuff in the upper esophagus and the ventilatory openings aligned with the opening to the larynx, the depth markings give an indication of the distance, in cm, to the vocal cords.
O. Confirm proper position by auscultation, chest movement and verification of CO2 by capnography.
P. Readjust cuff inflation to 60 cm H2O (or to just seal volume).
Q. Secure KING LT(S)-D to patient using tape or other accepted means.
R. DO NOT COVER THE PROXIMAL OPENING OF THE GASTRIC ACCESS LUMEN OF THE KING LTS-D.
S. The gastric access lumen allows the insertion of up to a 18 Fr diameter gastric tube into the esophagus and stomach. Lubricate gastric tube prior to insertion
T. Continue ongoing respiratory assessment and treatment

6. TUBE REMOVAL

Indications

1. Patient regains consciousness
2. Protective gag reflex returns

B. Deflate cuff, remove King airway device in one motion. Suction as needed
C. Monitor airway and respirations closely.
D. Place the patient on high flow oxygen and assist with ventilation as needed

END

Back to Index ↑

Digital Intubation

Indications:

1. Patient is deeply comatose;
2. Cardiac arrest;
3. When proper positioning is difficult to achieve. Example: trauma, cervical spine injuries, facial injuries that distort the anatomy;
4. When there are copious amounts of blood, vomitus, or other secretions that cannot be suctioned out for proper visualization.

Contraindications:

1. Patient that is not comatose or
2. Patient retains the ability to bite.

Procedure:

1. BSI
2. Maintain ventilatory support.
3. Assemble & check equipment.
4. Insert stylet into endotracheal tube & bend the tube into a "J" shape.
5. Maintain C-spine precautions.
6. Place bite blocks in-patients molars.
7. Insert middle and index finger in patient's mouth; pull forward on the tongue.
8. Palpate the epiglottis and press forward.
9. Insert the tube into the mouth anterior to your fingers.
10. Direct the tube tip between the epiglottis and the fingers. Advance the tube through the cords while simultaneously pressing the tube forward with the index and middle fingers. This will prevent the tube from slipping into the esophagus.
11. Confirm placement.
12. Inflate the cuff with 5 to 10 cc of air.

End

Trousers (PCT)

INDICATIONS:

1. Known or suspected severe blood loss, resulting from blunt trauma, or medical or obstetrical causes, if systolic BP is ≤ 50 mmHg

CONTRAINDICATIONS:

1. Hypotension associated with heart attack (cardiogenic shock)
2. Pulmonary edema
3. Penetrating trauma anywhere on the body, regardless of other injuries
4. Inflation of the abdominal compartment in pregnancy is a relative contraindication.

PRECAUTIONS:

1. Do not inflate abdominal section without physician order.
2. Do not deflate PCT without physician order unless signs/symptoms of pulmonary edema exist.
3. Physicians may choose not to use PCT suit, as it is controversial in its effectiveness.
4. Respirations may need to be assisted after inflation of abdominal section.

INFLATION PROCEDURE:

1. Check vital signs and lung sounds. Expose and perform exam of areas that will be covered by PCT.
2. Remove articles such as belts with large buckles, keys, etc. from pockets.
3. Position patient on the PCT. The top of the garment should be placed just below the lowest rib.
4. Wrap garment snugly and secure Velcro. Avoid wrinkles in garment to ensure proper inflation.
5. Attach air tubing. Open valves to legs and close valve to abdominal section.
6. Inflate both legs until Velcro crackles. Close leg valves.
7. Recheck vital signs and lung sounds. If systolic pressure remains low, the physician may order inflation of the abdominal section.
8. Inflate abdominal section by opening valve to the abdominal section while leg valves remain closed. Inflate abdominal section until Velcro crackles. Close valve.
9. Recheck vital signs and lung sounds.
10. Continue to monitor vital signs every 3 to 5 minutes during transport. Check the PCT for adequate inflation enroute.

DEFLATION PROCEDURE:

1. Deflate only under controlled circumstances. Patient should be in a definitive care facility with a physician in attendance and appropriate volume replacement in progress or completed
2. Check patient's blood pressure and pulse.
3. Never deflate entire PCT at once. Deflate abdominal section first, then each leg separately.
4. Deflate slowly - 15 to 20 minutes for each section. Detach tubing at abdominal valve, place thumb over connector and open valve. Release air slowly by thumb control.
5. Continue to monitor BP every 2 - 3 minutes throughout deflation procedure.

6. If BP drops by 5 mmHg, stop deflation until BP is stabilized by further volume replacement.

PEDIATRIC CONSIDERATIONS:
1. Inflation in pediatric patients is per physician order only.

SPECIAL NOTES:
1. Head injury is not a contraindication.
2. The PCT should not be used for lower extremity long bone splinting. These injuries should be splinted using standard splinting devices or traction splints, when appropriate.

The PCT may be used as an air splint for an unstable pelvis as long as no other complications are present.
END

Back to Index ↑

Pulse Oximetry

Normal SaO2 for healthy individuals is 95-100%. Low (≤ 93%) or falling SaO2 indicates airway or ventilatory status may be compromised.

INDICATIONS:
1. Respiratory distress/complaints
2. Cardiac problems
3. Multiple system trauma
4. Poor color
5. Pts requiring airway adjuncts and/or assisted ventilations
6. Suspected shock
7. Altered LOC

PRECAUTIONS:
1. Hemoglobin disorders (e.g. CO) poisoning, anemia) may cause artificially high SaO2 readings, which should be interpreted with extreme caution.
2. SaO2 reading may be difficult to obtain in states of low perfusion.

PROCEDURE FOR Sa02 <90% OR FALLING Sa02:
1. Check airway and manage as indicated.
2. Increase oxygen liter flow and/or assist ventilation.
3. Check probe placement. Causes of inaccurate readings include:
   A. Excessive probe movement.
   B. Optical interference by bright light; cover the sensor.
   C. Poor waveforms/signals (hypovolemia, hypothermia, hypotension or vasoconstriction)
   D. Artificial fingernails and dark colored nail polishes.

PEDIATRIC CONSIDERATIONS:
1. Special probes may be required to obtain readings in pediatric pts.

SPECIAL NOTES:
1. Best probe site in adults is usually middle fingertip with nail polish removed.
2. Attempt to obtain and document Sa02 before and during 02 therapy.
3. Oximetry may detect hypoxia not evidenced by signs or symptoms.

END

Back to Index ↑

Airway Pressure (CPAP)

Continuous Positive Airway Pressure has been shown to rapidly improve vital signs, gas exchange, work of breathing, decrease the sense of dyspnea, and decrease the need for endotracheal intubation in patients who suffer from shortness of breath from asthma, COPD, pulmonary edema, CHF, and pneumonia. In patients with CHF, CPAP improves hemodynamics by reducing cardiac preload and afterload.

INDICATIONS:

1. Any patient who is in respiratory distress with signs and Symptoms consistent with asthma, COPD, pulmonary edema, CHF, or pneumonia, and who:
   A. Is over 12 years old, awake and oriented/able to follow commands. And has the ability to maintain an open airway, and able to fit the CPAP mask.

   And who exhibit two or more of the following:
   B. A respiratory rate greater than 25 breaths per minute, Pulse Oximetry of less than 94% at any time and/or uses accessory muscles during respirations.

CONTRAINDICATIONS:

1. Patient is in respiratory arrest/apneic
2. Patient is suspected of having a pneumothorax or suffered trauma to the chest
3. Patient has a tracheostomy
4. Patient is actively vomiting or has upper GI bleeding.
5. Decreased LOC.

PROCEDURE:

1. **EXPLAIN THE PROCEDURE TO THE PATIENT**
2. Ensure adequate oxygen supply to ventilation device (100% when starting therapy and until SaO2 is >95%).
3. Place the patient on continuous pulse oximetry and cardiac monitor.
4. Place the delivery device over the mouth and nose.
5. Secure the mask with provided straps or other provided devices
6. Start CPAP at 5cm H2O of pressure and increase gradually to 10cm H2O of pressure as patient adjusts and tolerates the pressure. Check for air leaks
7. Monitor and document the patient's respiratory response to treatment
8. Check and document vital signs every 5 minutes.
9. Administer appropriate medication as certified (continuous nebulized Albuterol for COPD/Asthma and repeated administration of nitroglycerin spray for CHF).
10. Continue to coach patient to keep mask in place and readjust as needed.
11. If respiratory status deteriorates, remove device and consider intermittent positive pressure.
12. Contact receiving hospital in advance to advise them you have CPAP.
13. If respiratory ventilation status deteriorates, remove device and consider intermittent positive pressure ventilation via BVM and/or placement of non-visualized airway or endotracheal intubation.

REMOVAL PROCEDURE:

1. CPAP therapy needs to be continuous and should not be removed unless the patient cannot tolerate the mask or experiences respiratory arrest or begins to vomit.

2. Intermittent positive pressure ventilation with a BVM, placement of non-visualized airway and/or endotracheal intubation should be considered if the patient is removed from CPAP therapy.

PEDIATRIC CONSIDERATIONS:

1. CPAP should not be used in children under 12 years of age.

SPECIAL NOTES:

1. Do not remove CPAP until hospital therapy is ready to be placed on patient.
2. Watch patient for gastric distention, which could result in vomiting.
3. Due to changes in preload and afterload of the heart during CPAP therapy, a complete set of vital signs must be obtained every 5 minutes.

END

Back to Index ↑

ACSI Circulatory Enhancer /RESQPOD

INTRODUCTION:

The ACSI Circulatory Enhancer and the ResQPOD Circulatory Enhancer provide a small but important amount of resistance when the patient inhales through the device. This resistance increases blood flow back to the heart which increases the preload of the heart.

INDICATIONS:

1. Signs & symptoms of shock other than cardiogenic:
    a. BP < 100/p
    b. Tachycardia
    c. Cool, clammy skin
2. Cardiac arrest (ResQPOD)

CONTRAINDICATIONS:

1. Cardiogenic shock
2. Pulmonary edema
3. Chest trauma/Flail chest
4. Complaints of chest pain
5. < 12 y/o or < 100 lbs.

PRECAUTIONS:

1. Breathing patient may not be able to tolerate this device.
2. Use in children and pregnancy has not been established.
3. Discontinue if patient experiences fatigue, SOB or claustrophobia.

PROCEDURE:

1. Breathing Patient, ACSI Circulatory Enhancer (Orange Device):
    A. Make sure patient is breathing on their own adequately.
    B. Explain procedure to the patient.
    C. Attach supplemental oxygen.
    D. Gently, but firmly, apply mask tightly over mouth and nose.
    E. Have patient take normal deep breaths.
    F. Apply straps to hold mask on patient.
    G. Constantly monitor the patient's ventilations (SaO2).
    H. Discontinue if SOB, difficulty with ventilations, or the patient deteriorates.
2. Cardiac Arrest Patient, ResQPOD (Clear device with lights):
    A. Select airway adjunct (mask, Combitube or ET tube).
    B. Turn timing lights on.
    C. Continue CPR allowing complete chest re-coil after each compression.
    D. Do not allow hyperventilation.
        i. 15:2 unprotected airway
        ii. 5:1 protected airway
    E. Place ResQPOD between adjunct and bag-valve mask with supplemental oxygen and ensure the mask has a continuous tight seal.
    F. Ensure ET/Combitube is properly placed and secured with mechanical tube holder. Patient must be placed in head block and C-collar. Use caution so additional weight of ResQPOD does not move ET/Combitube.
    G. Document time ResQPOD is placed in circuit and any changes in skin color
    H. If ResQPOD fills with blood/emesis/fluid, remove fluid. Re-apply and continue ventilations.

I. If EMS providers or hospital staff has not been trained in the ResQPOD, discontinue use. Only healthcare providers who are trained in the use of the ResQPOD should use the device.
J. Remove ResQPOD when the patient starts breathing, consider replacing the ResQPOD with the ACSI Circulatory Enhancer (orange device) if still in shock.

PEDIATRIC:
1. Do not use in patient < 12 y/o or under 100 lbs.

SPECIAL NOTES:
1. Both devices are single use only, do not reuse.
2. Use caution so the extra weight from the ResQPOD does not cause ET or Combitube to become dislodged.
3. When the patient is intubated, use the lights on the ResQPOD to ensure the patient is not hyperventilated.

END

Back to Index ↑

Asherman™ Chest Seal *(For open chest injuries)*

The ACS is a safer approach to treating open pneumothorax and preventing tension pneumothorax in chest injuries from gunshot, stab wounds or other penetrating chest trauma.

The unique one-way valve is designed to let air and blood escape while preventing re-entry of either. Proven to be a more effective treatment than standard petroleum gauze, the ACS is standard issue for the U.S. Army and the U.S. Navy. Product Specifications: Clear circular design. One-way valve. Gauze pad included. Strong adhesive. Sterile. Easy open package. Product Benefits: One-way valve to let air and blood escape while preventing re-entry of either. Ample dressing size of 5.5 inch diameter. Gauze pad for cleaning and drying wound area. Clear pad design for optimal visualization of wound. Pressure-sensitive adhesive assuring effective seal, even through body hair.

ACTION:
1. Used for emergency relief and prevention of tension pneumothorax due to gunshot, stab wounds, or other penetrating trauma (open fractures).

CONTRAINDICATIONS/PRECAUTIONS
1. Not recommended for simple pneumothorax or hemothorax
2. Possible allergic reactions to latex should be considered if the Heimlich Valve is used

ADVERSE EFFECTS:
1. None

PROCEDURE:
1. Clean and dry the area immediate to the wound with sterile 4”x4” gauze pad.
2. Remove protective liner from adhesive coated surface.
3. Place dressing on patient, adhesive side down, with valve directly over wound.
4. Press base of dressing firmly in place to assure an occlusive seal.

SPECIAL NOTES:
1. As your patient breathes or coughs, the valve will probably flutter. You’ll also feel and hear air exiting the valve’s distal end if your patient has a pneumothorax.
2. Place a gauze dressing or trauma dressing near opening for any drainage that may occur.

END

Back to Index ↑

Demand Valve Resuscitator (Positive Pressure Ventilation)

INTRODUCTION:
The demand valve resuscitator is intended to assist with ventilation, delivering a variation of tidal volumes. The demand valve resuscitator will connect to a Combitube or ET tube as well as standard pocket masks or blob masks.

INDICATIONS:
1. Patients weighing at least 40 kg requiring controlled ventilatory assistance due to ↓ LOC or apnea

CONTRAINDICATIONS:
1. Patients weighing < 90 lbs or < 12 years of age.
2. Patients with a known tidal volume that is below normal, i.e. patient with one lung removed

PRECAUTIONS:
1. Do not make changes in the configuration of the tubes, hoses, or parts without manufacturer and medical direction approval.
2. Source gas must be medical oxygen limited to 50 psi.
3. The device must be tested prior to use on any patient.
4. Frequent re-evaluation of ventilation is critical. There is no audible alarm to indicate the resuscitator is not working. If there is any question about whether the patient is being adequately ventilated, discontinue use and manage the airway with a bag valve mask and 100% oxygen.
5. Patients with increased airway resistance, from causes such as asthma, near drowning, and pulmonary edema, may require higher inspiratory ventilation pressures. In these instances, pre-set tidal volumes may not be delivered to the patient. Discontinue resuscitator use and proceed with bag valve mask ventilation (no demand valve) to ensure adequate tidal volumes.
6. Device will stop functioning if oxygen tank is empty.
7. In the spontaneously breathing patient, discontinue resuscitator and support breathing manually as needed.

PROCEDURE:
1. Insure patient's ABCs are being appropriately managed. If standard resuscitation mask is being used, attempt to insert oral or nasal airway.
2. Insert advanced airway (Combitube or ET tube) per appropriate procedures.
3. Patient ventilation
    A. Attach device to tube on the advanced airway.
    B. Press resuscitator button and assess for adequate ventilation, i.e. chest rise, lung sounds, SaO_2.
    C. If adequate chest movement does not occur, an increase in airway pressure is occurring.
        1. Check for kinked tubing. Correct as indicated.
        2. Assess patient for airway obstruction. Suction and treat as indicated.

3. If airway is not obstructed, and inadequate chest movement occurs, discontinue use and proceed with bag valve mask ventilation (no demand valve) to ensure adequate tidal volumes.
4. Disinfection must be accomplished according to manufacturer specifications after every patient use.

SPECIAL NOTES:
1. May only be performed by Intermediate 99 and Paramedic/RN personnel.

END

Back to Index ↑

End Tidal Carbon Dioxide Detection *(Easy Cap™)*

INTRODUCTION:
Carbon dioxide (CO_2) is a byproduct of respiration. Approximately 5% of the exhaled air of a healthy patient is carbon dioxide. End-tidal CO_2 ($ETCO_2$) detection devices are useful in identifying the correct placement of a Combitube or endotracheal (ET) tube. The Easy Cap CO_2 detector is a disposable chemical indicator that can be used for up to three hours. It works by detecting $ETCO_2$ on the following color scale:

- Range A (purple): < 0.5% $ETCO_2$
- Range B (tan): 0.5 - 2.0% $ETCO_2$
- Range C (yellow): > 2.0% $ETCO_2$

INDICATIONS:
1. To assist in determining correct ET tube or Combitube placement patients > 15 kg (33 lb.)

PRECAUTIONS:
1. In low perfusion states, such as cardiac arrest, the production of CO_2 is significantly diminished and therefore, dramatic color changes may not be evident. In these cases, if the detector remains purple, reassessment of other correct tube placement indicators is crucial.
2. A patient that has recently consumed carbonated beverages may cause a false positive reading if ventilation is attempted through a tube placed in the esophagus.
3. Never rely entirely on ETCO2 detection as the sole method of confirming adequate tube placement and ventilation.

PROCEDURE:
1. Perform Combitube or ET intubation per guideline.
2. Assess ET placement by using TubeChek, listening for lung sounds, gastric sounds, and looking for chest rise.
3. After 6 - 7 ventilations, place the Easy Cap device on the ET tube (or the appropriate ventilation port of the Combitube) and continue ventilating the patient. If placement is correct, the device should change color from purple to tan (or possibly yellow) with each ventilation. A color change is a positive indication of correct tube placement.
4. If the color does not change, and other assessment indicators are positive or questionable for correct tube placement, IMMEDIATELY USE DIRECT VISUALIZATION TO DETERMINE TUBE POSITION. REMOVE ANY TUBE WHEN POSITION CANNOT BE CONFIRMED.
5. The $ETCO_2$ detector should be removed after placement has been confirmed, but may be used again to reassess tube placement.
6. Document results of $ETCO_2$ detection on run report form.

PEDIATRIC CONSIDERATIONS:

1. The Pedi-CAP™ $ETCO_2$ detector should be used on patients 1 - 15 kg.

REFERENCE GUIDELINES:
1. Combitube
2. Respiratory related signs and symptoms
3. Automatic transport ventilator (ATV)
4. Endotracheal Intubation

END

Back to Index ↑

Endotracheal Intubation

INDICATIONS:
Endotracheal (ET) intubation is the preferred method of airway control in the following patients:
1. Comatose, unresponsive patients with a GCS of < 9
2. Cardiac or respiratory arrest
3. Profound respiratory depression, especially in:
    A. Pulmonary edema, chronic obstructive pulmonary disease, or asthma
    B. Cerebral insult or injury (use C-spine precautions)

PRECAUTIONS:
1. Intubation should be done with in-line spinal stabilization in trauma victims.
2. Take appropriate universal precautions, including facial protection.

INSERTION PROCEDURE:
1. Pre-oxygenate patient for a minimum of 2 minutes and attempt to raise SaO2 prior to intubation.
2. Direct the application of cricoid pressure and maintain until airway is secured. If the patient begins to actively vomit, cricoid pressure should be discontinued until the vomiting stops and the airway has been cleared.
3. Clear airway of foreign bodies/secretions. Have suction available.
4. Check equipment, insert stylet (as needed), and lubricate tube.
5. Place patient in sniffing position. In trauma, manually maintain in-line stabilization.
6. Hold laryngoscope in left hand; insert in right side of mouth and move the tongue to the left.
7. Visualize vocal cords. Attempts at intubation should last no longer than 30 seconds.
8. Insert tube until proximal end of cuff lies 1/2"-1" beyond cords. Manually secure the tube until it has been properly secured.
9. Record tube depth at teeth. General guideline for placement of an ET tube in an adult is:
    A. Males: 23 cm at the lips and 22 cm at the teeth
    B. Females: 22 cm at the lips and 21 cm at the teeth

If in doubt, 22 cm at the lips should work for most adults.
1. Remove stylet and inflate cuff with 5 - 10 cc air.
2. Secure tube with one hand and check placement with TubeChek-B.
3. Ventilate patient with 100% oxygen while assessing for chest rise and lung and stomach sounds.
4. Attach end-tidal CO2 detector, if available, and look for color change.
5. Other indications that the tube is placed correctly include:
6. The patient's SaO2 reading and color improve.
7. Condensation collects inside the tube with each breath.
8. A maximum of two attempts is allowed.

9. Patient should be Pre-oxygenated for 2 minutes between attempts.
10. If intubation is not successful after 2 attempts, other means of airway management should be utilized, i.e. Combitube or oral/nasal airway.
11. Pre-oxygenate patient for at least 2 minutes.
12. Secure tube with appropriate screw down or slip lock device (tape is unacceptable) again noting tube depth*.
13. Position patient on backboard and immobilize head. Use C-collar if trauma is suspected.
14. Frequently reassess ET tube placement. Use direct visualization if necessary.
15. Consider 2.5 - 5 mg Diazepam (valium) IV/IM for patients experiencing tube stress.

REMOVAL PROCEDURE: The ET tube should not be removed unless placement cannot be determined or position is felt to be non-tracheal.

1. Have suction equipment ready.
2. Log roll the patient to the side.
3. Deflate the distal cuff. The pilot balloon should completely collapse.
4. Remove ET tube during expiration (if patient is spontaneously breathing) while suctioning the airway.

PEDIATRIC CONSIDERATIONS:

1. For pediatric patients, the proper depth marking at the teeth/gums will vary from 8 cm in the premature infant to 20 cm in the adolescent. The vocal cord marker on the distal end of the tube should be present at the level of the glottic opening to ensure that the tip of the tube is in midtracheal position.
2. Tube size can be estimated by selecting a tube with an outside diameter that approximates the diameter of the child's little finger.
3. The TubeChek-B. Should not be used on children < 5 years or 20 kg.
4. The Pedi-CAP. ETCO2 detector should be used on patients 1 - 15 kg.

SPECIAL NOTES:

1. **May only be performed by I99/Medic ALS personnel.**
2. ET intubation is the preferred method of airway management in the patient with a GCS < 9. ET intubation is possible if a Combitube has been placed. Deflate the pharyngeal balloon of the Combitube. Push the Combitube to the left and attempt ET intubation.
3. Remain with patient at hospital until responsible physician or anesthetist is present.
4. A physician or anesthetist signature is required on the run form anytime a patient is transported to a medical facility with an ET tube in place.
5. The ET tube must be left in place when a patient is pronounced dead in the field.
6. If intubation was unsuccessful, document difficulties such as "jaws clenched" or "copious vomiting". Also document reasons why intubation was not performed if it was indicated.
7. Consult with Medical Control regarding tube removal if patient no longer tolerates tube. Paramedics, CCTP, RN's may RSI patient. Two required to RSI.
8. Improvement in level of consciousness alone does not automatically require tube removal.

END

Back to Index ↑

Endotracheal Tube Introducer

INTRODUCTION:
The endotracheal tube introducer is used to facilitate difficult intubations. It should not be confused with a more ridged stylet, which is inserted into the ET tube to alter its shape prior to intubation. The endotracheal tube introducer (gum-elastic bougie) is much softer, maneuverable and blunter than a stylet. Proper technique is considered to be an atraumatic procedure.

INDICATIONS:
1. Short, thick (bull) neck
2. Pregnancy
3. Laryngeal edema (anaphylaxis, burns)
4. Normal anatomical variation
5. Supra-glottic neoplasms
6. Inability to position patient appropriately (e.g. entrapment, confined space)
7. Trauma to the neck

PRECAUTIONS:
1. Regurgitation
2. Laryngio spasms
3. Excessive force beyond the carina may cause trauma.
4. ET tubes should not be threaded over the introducer without the laryngoscope in place.

CONTRAINDICATIONS:
1. Pediatric patients

PROCEDURE:
1. On a difficult intubation, you should make at least one attempt with the tracheal tube introducer prior to resorting to the Combitube.
2. A 15 French introducer should be used for ET tube sizes 6.0-11.0
3. Lubricate lower portion of introducer with KY-jelly.
4. Perform laryngoscopy, if cords are not visible, identify all landmarks to aid intubation.
5. Place introducer into the pharynx and direct into the larynx. You may bend the introducer to negotiate the bend. Correct placement confirmed by detection of tracheal “clicks”.
6. Leave the laryngoscope in place while assistant threads ET tube over introducer into the trachea. If the tube sticks, rotate gently 90 degrees counterclockwise.
7. Hold tube firmly in place while withdrawing the introducer.
8. Remove laryngoscope and confirm tube placement as usual.
9. ET tube may be placed over the introducer prior to intubation, instead of a stylet.

SPECIAL NOTES:

1. **May only be preformed by Intermediate. Paramedic or approved RN personnel.**
2. Perform Sellick's maneuver if risk of regurgitation.
3. If unsuccessful with intubation immediately go to the Combitube.
4. Strong consideration should be given to use two licensed personnel to perform this procedure. The ALS person must intubate, but a BLS person could assist with holding the introducer.

END

Back to Index ↑

Infusion: EZ-IO™

INDICATIONS:

1. Patients in critical need of vascular access for volume replacement or medication administration and who have either poor vein selection or in whom one or two intravenous attempts have failed. If a patient needs immediate access for medications or fluid therapy, the Adult EZ-IO may be used in patients who are alert and oriented.
2. Patients known or appearing to be, over the age of 18.
3. Decreased level of consciousness (GCS < 6 with no purposeful movement) due to medical or traumatic insult or injury.

CONTRAINDICATIONS:

1. Patients known, or appearing to be, under the age of 18
2. Fractured tibia or femur
3. Knee replacement
4. Severe osteoporosis or tumor of the leg
5. Infection over the insertion site
6. Inability to locate landmarks for insertion
7. Excessive tissue over the insertion site

PROCEDURE: ***To be used only by Personnel trained to use this device Advanced EMT, Intermediate, Paramedic, RN:***

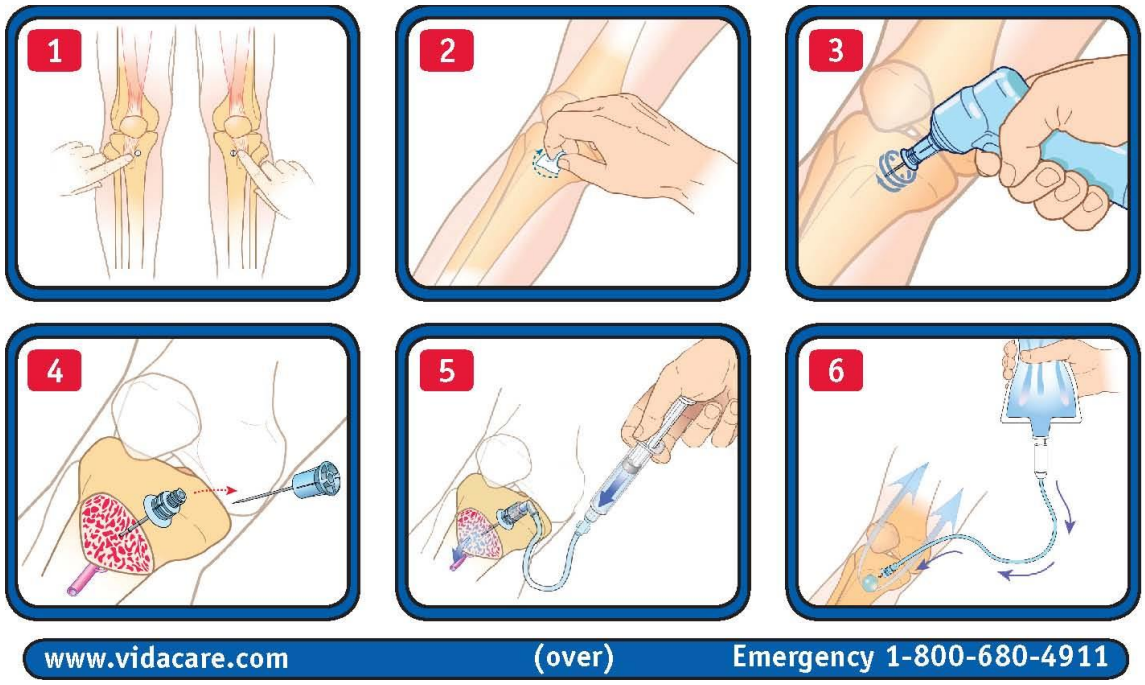
1. Assemble and prepare equipment and BSI, including a bag of normal saline with tubing purged.
2. Prep site with betadine or alcohol prep.
3. Locate the patella, tibial tuberosity, and flat surface of the tibia.
4. Verify that target zone is 2 fingers width medial and distal to the tibial tuberosity.
5. Open the EZ-IO cartridge and attach the needle set to the driver (there should be a snap).
6. Remove the cap from the needle by rotating clockwise until loose and pulling it free.
7. Stabilizing the leg with one hand, position the driver over the site at a 90 degree angle to the bone surface and power the needle through the skin ***only to the bone surface.***
8. Ensure the 5 mm mark (closest to the flange) on the catheter is visible. If the mark is not visible, do not proceed as the needle set is not long enough to penetrate the IO space.
9. Applying firm, steady pressure, power the needle set into the bone until the flange touches the skin ***or*** a sudden lack of resistance is felt.
10. While supporting the needle set with one hand, pull straight back on the driver to detach it from the needle set.
11. Grasping the hub firmly with one hand, rotate the stylet counter clockwise until loose, pull it from the hub, place it in the stylet cartridge, and place in a biohazard container.
12. Confirm placement by; visible blood at the tip of the stylet, aspiration of marrow, free flow of IV fluid without evidence of leakage or extravasation.
13. **If the patient responds to pain**, administer adults Lidocaine 2%, 20-40 mg IO slowly effectively blocks the pressure sensors in the intraosseous space. Pediatric patients dosage 0.5 mg/kg as a slow initial push
14. Infuse a 10 cc flush of N.S. to create space in the bone marrow.

EZ-IO Reference card

15. Secure catheter and IV tubing with tape.
16. Watch for soft tissue swelling.
17. Leave IO information at the hospital.

SPECIAL NOTES:

1. If drip rate is slow, flush with 10 cc normal saline. If slow drip continues, consider inflating BP cuff on bag to 300 mm/Hg.
2. All medications and blood or blood products that are given via the IV route may be given IO.
3. Device may be left in place for up to 24 hours.
4. The device can be removed by grasping the catheter hub and rotating while pulling gently. A syringe can be attached if a larger handle is desired (rotate clockwise).



END EZ I/O

Back to Index ↑

12 Lead ECG Monitoring

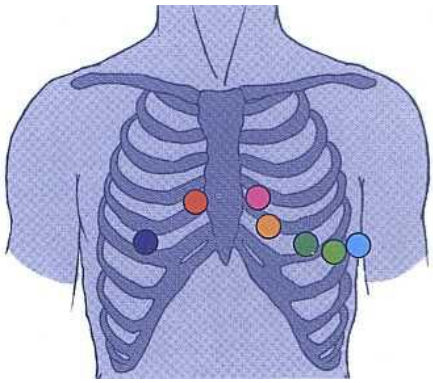
INTRODUCTION:
Pre-hospital 12 – lead electrocardiograms (ECGs) benefit patient care by alerting receiving physicians to potential thrombolytic candidates, by decreasing the time to in hospital thrombolytic administration, and by providing a baseline ECG for comparison.

INDICATIONS: Conscious, stable patients presenting with:
1. Chest pain or pressure of presumed cardiac etiology, and/or
2. Shortness of breath of presumed cardiac etiology
3. Other signs and symptoms that may be of cardiac origin

CONTRAINDICATIONS:
1. Patients who have been subjected to trauma
2. Cardiac arrest
3. Sustained paced rhythm

PRECAUTIONS:
1. Do not significantly delay transport to conduct test.
2. On female patients, always place leads V3 – V6 under the breast rather than on the breast.
3. Never use the nipples as reference points for electrode location as nipple locations may vary widely.
4. A "normal" ECG does not definitively rule out a MI nor should it be justification for non-transport.
5. Women, the elderly, and persons with diabetes may present with atypical S&S of AMI.

PROCEDURE:
1. Whenever possible, attempt to obtain 12-lead with patient in supine position. If patient does not tolerate, place in semi-reclining or sitting position. Document the patient's position.
2. Document patient name, sex, and age. Leave ECG size preset at x 1.
3. Prep the skin and shave hair as necessary.
4. Apply electrodes as follows and attach the appropriate lead to an electrode:



Limb (extremity) Leads:
Right arm (RA) – Right forearm
Right leg (RL) – Right calf
Left arm (LA) – Left forearm
Left leg (LL) – Left calf

Precordial (chest) Leads:
V1 – Fourth intercostal space to the right of the sternum
V2 – Fourth intercostal space to the left of the sternum
V3 – Directly between leads V2 and V4
V4 – Fifth intercostal space at midclavicular line
V5 – Level with V4 at left anterior axillary line
V6 – Level with V5 at left midaxillary line

5. Attempt to obtain the 12-lead while the vehicle is not moving. Ask the patient to remain motionless for 15 seconds (it is okay to breathe). Acquire and print two copies of the 12-lead ECG report.
6. If the monitor detects signal noise (such as patient motion or a disconnected electrode), the 12-lead acquisition is interrupted until noise is removed. Take appropriate action as required (such as reconnecting leads).
7. Interpretation should be relayed to receiving hospital during patient report. Document "Obtained 12-lead ECG." on patient run report and attach one copy to run report.
8. Notify receiving hospital personnel immediately upon arrival at hospital that 12-lead has been performed and leave one copy with receiving physician.

SPECIAL NOTES:
1. Locating the V1 position (fourth intercostal space) is critically important because it is the reference point for locating the placement of remaining V leads. To locate the V1 position:
   A. Place your finger at the notch in the top of the sternum.
   B. Move your finger slowly downward about 1.5 inches until you feel a slight horizontal ridge or elevation. This is the "angle of Louis" where the manubrium joins the body of the sternum.
   C. Locate second intercostal space on the right side, lateral to and just below the angle of Louis.
   Move your finger down two more intercostal spaces to the fourth intercostal space, which is the V1 position.

IF INFERIOR MI-IS IT RIGHT SIDED?
Right Side MI:
A. Inferior MI on standard 12-Lead ECG

B. ST ↑ > in lead lll than in ll

C. ST ↑ in V1 (could go through V6)

D. ST ↓ in V2 (less than ½ ↑ in AVF)

E. ST ↑ in V4R –V6R

IF INFERIOR MI- IS IT POSTERIOR?
Posterior MI:
A. Inferior MI on Standard 12-Lead ECG
B. Tall & wide R-wave in V1 & V2

C. ST↓ with upright T wave in V1 & V2

Special Considerations:

1. In the setting of an acute myocardial infarction, rapid assessment, treatment, and undelayed transport are essential to avoid further delays to in-hospital treatment, such as thrombolytics and angioplasty.
2. Patients complaining of cardiac signs and symptoms will have a 12-Lead ECG done as soon as possible. Because treatment can affect how ST-elevation looks on a 12-Lead, the 12-Lead should be performed with the initial set of vital signs.
3. Patients with ST-Elevation should be transported to a facility that can have the patient in their cath lab within 60 minutes and have balloon inflation under 90 minutes. United Hospital (activate with BAT Phone procedure) or MRCC for Regions Hospital, St. Joseph's Hospital, or U of M hospital.
4. Inclusion criteria for a "Code AMI" patient will include (consider activation of cath lab from scene):
    a. Patient has cardiac symptoms
    b. ST-elevation greater then 1 mm in two or more contiguous leads
    c. QRS complex that is less than 0.12 sec. (120 ms or 3 small boxes)

END

Back to Index ↑

Needle Chest Decompression

INDICATIONS:

1. To relieve a tension pneumothorax, either spontaneous or as a result of trauma. Evidence of a tension pneumothorax may include the following signs and symptoms:

• Decreased or absent breath sounds	• Distended neck veins
• Hypotension	• Tracheal deviation
• Central cyanosis	• Uneven chest wall movement
• Pulseless electrical activity	• Progressive respiratory distress

PRECAUTIONS:

1. Always insert needle over (cephalad to) rib to avoid neurovascular bundle.
2. An IV catheter may not be used for this procedure.

ADULT & PEDIATRIC PROCEDURE:

1. Identify 2nd intercostal space on affected side.
2. Clean area with alcohol and/or Betadine at midclavicular line.
3. Select appropriate needle. Adults: 10-12 ga 3" needle through catheter. Peds: 14-16 ga 1 ¾" needle through catheter.
4. Position needle at midclavicular line in the middle of the rib and puncture the skin.
5. Advance needle over 3rd rib into chest at 45° angle to the chest wall and parallel to sternum. At pleural cavity a slight "give" is felt.
6. Advance further into chest until bevel clears pleura. Do not advance the needle any further than is necessary to advance the catheter.
7. Advance the catheter over the needle and then remove needle.
8. Connect tubing to the Heimlich valve and assure that valve is connected so that air is allowed to flow out of the chest cavity.
9. Secure catheter to chest.
10. Do not clamp tubing. Low suction may be applied intermittently to assist evacuation of pneumothorax.

SPECIAL NOTES:

1. May only be performed by ALS personnel.
2. Rush of air and/or tube fogging and/or patient improvement indicates correct placement.

3. Once needle is placed, pre-hospital personnel should not remove it.

END

Back to Index ↑

Transcutaneous Pacing

Indications:
1. Symptomatic bradycardia: Hypotension, Pulmonary Congestion (rales/JVD), chest pain, SOB or decreased LOC.
2. Symptomatic 2nd degree type II or 3rd degree block
3. Slow PEA due to drug OD, acidosis or electrolyte abnormalities
4. Witnessed Asystole

Contraindications:
1. Tachycardias
2. Hypothermia

Procedure:
1. Place multi pad electrodes
2. Consider sedation with Morphine, 2 mg/min slow IVP.
3. Turn on pace maker
4. Set rate at 80 bpm
5. Bradycardia=slowly ↑ mA until electrical capture. If electrical capture – ensure mechanical capture
6. Increase mA by 10% to ensure adequate threshold
7. Contact M.D. for further sedation

Special notes:
1. Ensure adequate oxygenation in children with bradycardia
2. Document on Cardiac Arrest/Advanced Procedure Data Collection Form.

END

Back to Index ↑

Cardioversion

Indications:
Unstable tachycardia with Heart rate above 150 bpm:
Unstable = *Hypotensive, SOB, Chest Pain, Altered LOC, shock, acute MI, Pulmonary Edema*
Narrow and wide QRS complex
V-Tach (monomorphic and polymorphic), SVT, Atrial Fibrillations, Atrial Flutter.

Contraindications:
1. Poison or drug-induced Tachycardia (Treat underlying problem with antidote if available).
2. V-fib or pulseless v-tac (requires defibrillation).
3. Heart rate under 150 does not usually need cardioversion

Procedure:
1. Explain procedure to Patient.
2. Have intubation equipment, suction, IV and arrest meds ready, enough ECG paper for recording.
3. Consider pre-medication with 2 mg Morphine slow IV/IO.
4. Turn on defibrillator and attach limb leads (3-lead) in lead II
5. Place multifunction Defib pads on Patient
6. Select appropriate energy level (Biphasic = 50J, 75J, 120J, 150J, 200J)
7. Announce you are doing cardioversion and make sure everyone is clear
8. Check monitor and assess rhythm
9. If still unstable, repeat #5-10 at next appropriate energy level
10. Contact Medical control if any questions/concerns.

Special notes:
1. Low "R" wave = adjust gain or change lead placement
2. A-Fib longer than 48 hours, contact M.D. before converting rhythm.
3. Document on Cardiac Arrest/Advanced Procedure Data Collection Form attach to PCR.

END

Back to Index ↑

Pericardiocentesis

INDICATIONS:
For use on patients with suspected cardiac tamponade or pericardial effusion as evidenced by the following:
Pulses paradoxus:

1. decline > 10 mm Hg systolic pressure during normal inspiration
2. Narrowing of pulse pressure
3. Hypotension (late sign)
4. Jugular vein distension
5. Pulseless Electrical Activity (PEA)

PRECAUTIONS:

1. Pneumothroax or hemopneumopericardium may result from leaving needle open to air.
2. The Protective™ IV catheter must not be used for this procedure.

ADULT PROCEDURE:
This procedure may be performed on any patient prior to physician order.

1. Identify landmarks (costal margin, xiphoid process).
2. Prepare site (attempt to maintain sterility as much as possible).
3. Cleanse site with Betadine.
4. Use a 16 or 18 ga cardiac needle (3 ½") attached to a 3-way stopcock and 50 cc syringe. A 6" needle should also be available for adults with large chests.
5. Insert the needle at the xiphocostal angle approximately 30° aiming at the left nipple.
6. Advance the needle toward the left AC joint while applying a slight negative pressure on the syringe.
7. As you advance the needle into the pericardial sac, you may feel a slight give. Begin to withdraw 50-100 cc of blood or fluid.
8. Remove the needle following procedure. Apply direct pressure as necessary to control bleeding.
9. Monitor patient for cardiac ectopy. Assess for any improvement in hemodynamic status.
10. Notify medical control that the procedure has been performed.

PEDIATRIC PROCEDURE:

1. This procedure may be done on standing order.
2. Use the same size needle (3 ½") for children.

SPECIAL NOTES:

1. May only be performed by Paramedic, CCTP, and RN personnel.

END

Back to Index ↑

Needle Cricothyrotomy (Quicktrach)

INDICATIONS:
Patients requiring emergency assisted ventilation when all other conventional methods of ventilation (BVM, endotracheal intubation and/or combitube) have failed. Obstructed airway that cannot be cleared.

CONTRAINDICATIONS:

1. Tracheal transection.
2. Children less than 3 years of age.
3. When any other less invasive maneuver allows ventilation of the patient.

ADULT PROCEDURE:
This procedure is performed on standing order.

1. Pre-oxygenate the patient, if possible.
2. Identify the anterior surface of the neck and clean area with Betadine or alcohol.
3. Position the patient supine with the head slightly extended. Head extension is contraindicated if c-spine trauma is suspected.
4. Locate cricoid membrane. The cricothroid membrane is a 1 to 1.5 cm membrane that lies inferior to the thyroid cartilage and superior to the first tracheal ring. It is located by palpating the protuberant midline portion of the thyroid cartilage (Adam's apple) and then moving the fingertip inferiorly 1.5 cm until it rests in a soft, flat depression between the cricoid cartilage and the first tracheal ring.
5. Place your thumb and index finger of your non-dominate hand on either side of the tracheal cartilage to stabilize the trachea, and to anchor/stretch the skin slightly.
6. Use adult Quicktrach kit (4.0 mm I.D.) to pierce the skin and cricothyroid membrane at a 45 degree angle, directing the cathether tip inferiorly while pulling suction on the syringe. Aspiration of free air confirms entry into the tracheal lumen.
7. When the catheter tip enters the tracheal lumen, a slight give will be felt. The patient may also cough when the catheter stimulates the tracheal wall.
8. Slide the catheter sheath forward until it is snug against the skin, then withdraw the needle.
9. Attach Quicktrach flex tube to the catheter end.
10. Attach BVM to top end of Quicktrach flex tube and begin ventilating. Confirm correct placement by listening to lung sounds.
11. Secure catheter in place using pre-attached strap to Quicktrach ensuring hub of catheter is snug against the neck.

12. Contact medical control to inform them the Quicktrach has been used.

PEDIATRIC PROCEDURE:

1. Same as adult except use child Quicktrach (2.0 mm I.D.) kit.

SPECIAL NOTES:

1. May only be performed by Paramedic and qualified RN personnel.
2. Patient's airway/lung sounds must be continuously monitored to ensure proper placement.

END

Back to Index ↑

LUCAS 2 DEVICE

Purpose

This procedure describes the appropriate methods to apply, operate, and discontinue the LUCAS II device in patients > 12 years of age requiring mechanical chest compression related to cardiac arrest.

Indications

1. The Lucas may be used in patients 12 years of age and older who have suffered non-traumatic cardiac arrest, where manual CPR would otherwise be used.

Contraindications

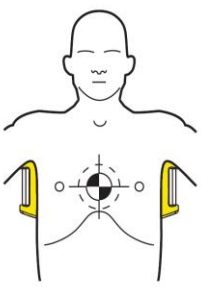
1. Patients suffering traumatic cardiac arrest or patients with obvious signs of traumatic injury.
2. Patients who do not fit within the device.
    a. Patients who are too large or with whom you cannot press the pressure pad down 2 inches.
    b. Patients who are too small and with whom you cannot pull the pressure pad down to touch the sternum

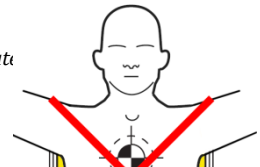
Protocol for Placement

1. All therapies related to the management of cardiopulmonary arrest should be continued as currently defined
2. Initiate resuscitative measures following the Join EMS guidelines
    a. Early defibrillation should be considered and provided as indicated based on clinical presentation.
    b. Manual chest compressions should be initiated ***immediately*** while the LUCAS device is being placed on the patient.
    c. **Limit interruptions in chest compressions to 10 seconds or less.**
    d. **Do not delay manual CPR for the LUCAS. Continue manual CPR until the device can be placed.**
3. While resuscitative measures are initiated, the LUCAS device should be removed from its carrying device and placed on the patient in the following manner.

Backplate Placement

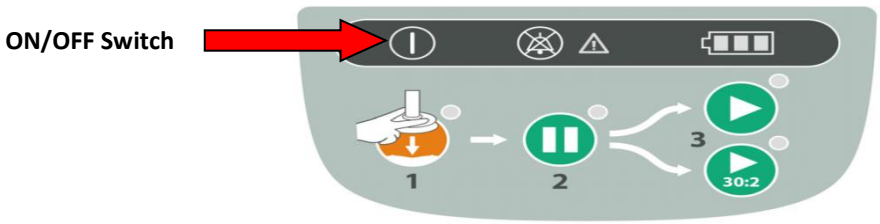
The backplate should be centered on the nipple line and the top of the backplate should be located just below the patient's armpits:





Position the Compressor

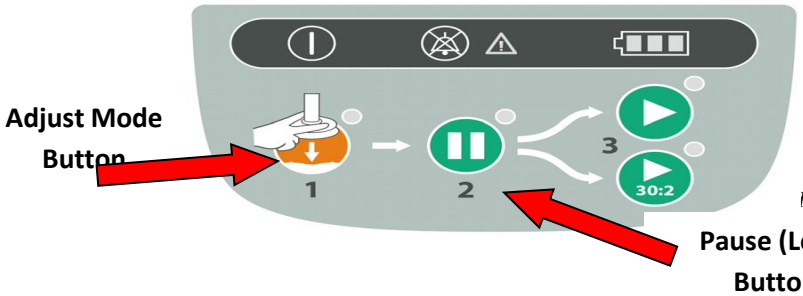
a. Turn the LUCAS Device on (the device will perform a 3 second self-test).



b. Remove the LUCAS device from its carrying case using the handles provided on each side.
c. With the index finger of each hand, pull the trigger to ensure the device is set to engage the backplate. Once this is complete, you may remove your index finger from the trigger loop.
d. **Approach the patient from the side opposite the person performing manual chest compressions.**
e. Attach the claw hook to the backplate on the side of the patient opposite that where compressions are being provided.
f. Place the LUCAS device across the patient, between the staff member's arms who is performing manual CPR.
g. At this point the staff member performing manual CPR stops and assists attaching the claw hook to the backplate on their side.
h. Pull up once to make sure that the parts are securely attached.

Adjust the Height of the Compression Arm

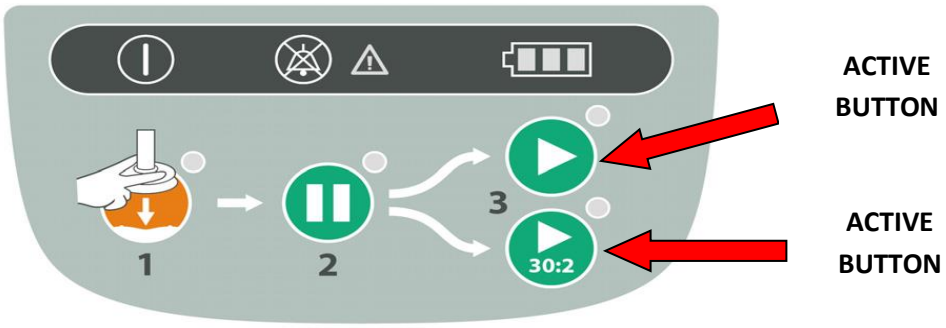
a. Use two fingers (V pattern) to make sure that the lower edge of the Suction Cup is immediately above the end of the sternum. If necessary, move the device by pulling the support legs to adjust the position
b. Press the Adjust Mode Button on the control pad labeled #1 (This will allow you to easily adjust the height of the compression arm).



c. To adjust the start position of the compression arm, manually push down the SUCTION CUP with two fingers onto the chest (without compressing the patient's chest)
d. Once the position of the compression arm is satisfactory, push the green PAUSE button labeled #2 (This will lock the arm in this position), then remove your fingers from the SUCTION CUP.
e. If the position is incorrect, press the ADJUST MODE BUTTON and repeat the steps.

Start Compressions

a. If the patient is not intubated and you will be providing compression to ventilation ratio of 30:2 push ACTIVE (30:2) button to start
b. If the patient is intubated and you will be providing continuous compressions push ACTIVE (continuous) button



Patient Adjuncts

a. Place the neck roll behind the patient's head and attach the straps to the LUCAS device. This will prevent the LUCAS from migrating toward the patient's feet.
b. Place the patients arms in the straps provided.

Using the LUCAS during the Resuscitation

Defibrillation

a. Defibrillation can and should be performed with the LUCAS device in place and in operation
b. One may apply the defibrillation electrodes either before or after the LUCAS device has been put in position
    i. The defibrillation pads and wires should not be underneath the suction cup
    ii. If the electrodes are already in an incorrect position when the LUCAS is placed, you must apply new electrodes
c. Defibrillation should be performed according to the instructions of the defibrillator manufacturer.

d. If the rhythm strip cannot be assessed during compressions, one may stop the compressions for analysis by pushing the PAUSE BUTTON (The duration of interruption of compressions should be kept as short as possible and should not be > 10 seconds. There is no need to interrupt chest compressions other than to analyze the rhythm).
e. Once the rhythm is determined to require defibrillation, the appropriate ACTIVE BUTTON should be pushed to resume compressions while the defibrillator is charging and then the defibrillator should be discharged.

Pulse Checks/Return of Spontaneous Circulation (ROSC)

a. Pulse checks should occur intermittently while compressions are occurring
b. If the patient moves or is obviously responsive, the LUCAS Device should be paused and the patient evaluated.
c. If there is a change in rhythm, but no obvious indication of responsiveness or ROSC, a pulse check while compressions are occurring should be undertaken. If the palpated pulse is asynchronous, one may consider pausing the LUCAS Device. If the pulse remains, reassess the patient. If the pulse disappears, one should immediately restart the LUCAS Device.

Disruption or Malfunction of Lucas Device

a. **If disruption or malfunction of the LUCAS device occurs, immediately revert to Manual CPR.**

Device Management

Power Supply

a. Battery Operation
  i. When fully charged, the Lithium Polymer battery should allow 45 minutes of uninterrupted operation
  ii. There is an extra battery in the Lucas Device bag
  iii. The battery is automatically charged when the device is plugged into a wall outlet and not in operation. The device should be stored with the Lucas Device plugged into a wall outlet **(When detaching from the wall outlet, make sure that the cord is always with the LUCAS Device)**.
  iv. When the orange Battery LED shows an intermittent light, one should replace the battery or connect to a wall outlet

b. One may connect the LUCAS Device to wall power in all operational modes (One must always keep the battery installed in order for the LUCAS Device to remain operational).

Power Supply Cord Slot

(for charging and AC operation)

Care of the LUCAS Device after use

a. Remove the Suction cup and the Stabilization Strap (if used, remove the Patient Straps).
b. Clean all surfaces and straps with a cloth and warm water with an appropriate cleaning agent
c. Let the device and parts dry.
d. Replace the used Battery with a fully-charged Battery.

e. The suction cup is reusable (unless torn or damaged). Remount the Suction Cup and straps
f. Repack the device into the carrying bag
g. Place used battery in charger unit.
h. Place LUCAS II back in Medic vehicle.

END

Back to Index ↑

Impact Ventilator (AEV)

INTRODUCTION:
The Impact ventilator is a self-contained, battery powered ventilation device that can be used to ventilate the intubated patient, or to establish CPAP ventilation in a patient with acute respiratory compromise with suspected pulmonary edema (examples: CHF, pneumonia), or to maintain CPAP or NPPV/BIPAP ventilations during interfacility transports. The Impact ventilator may only be used by Paramedic and approved RN personnel that have completed formal training on the use of the device.

INDICATIONS:
1. Patient with an advanced airway in place (endotracheal tube, King Airway, Combitube)
2. Any indication defined in the Airway Pressure (CPAP) guideline
3. Maintenance of NPPV/BIPAP therapy (interfacility transfers ONLY)

CONTRAINDICATIONS: DO NOT use on patient if….
1. Patient is unable to tolerate use of the device
2. Decreased LOC or unable to follow directions (CPAP/NPPV mode)
4. Tracheostomy (CPAP/NPPV mode)
5. Active vomiting or known GI bleed (CPAP/NPPV mode)
6. Suspected pneumothorax or chest trauma (CPAP/NPPV mode)

WARNINGS/PRECAUTIONS
1. A trained and certified operator must remain with the patient whenever the AEV ventilator is in use.
2. An operational check MUST be performed before each use of the ventilator.

PROCEDURE- OPERATIONAL CHECK
1. Open and inspect ventilator circuit, making sure all tubing connections are attached and patent.
2. Turn device on. Ventilator will perform self-check. Ventilator will display a patient disconnect alarm.
3. Connect ventilator circuit to the ventilator. The main ventilation tube connects to the Gas Output port, the green transducer line connects to the Transducer port, and the clear/white exhalation line connects to the Exhalation Valve port. All ports can be found on the top of the ventilator.
4. Check ventilator status by occluding the patient side of the circuit with a gloved hand. If ventilator is functioning properly, pressure should be felt at the patient end of the circuit during automated ventilations and ventilator alarm will sound indicating airway pressure high.
5. If either the patient disconnect alarm or the airway pressure high alarm fail to activate during the operational check, discontinue use of the ventilator and manually ventilate the patient.
6. Follow appropriate operational instructions as listed below based on desired use of the ventilator.

ASSIST CONTROL MODE – AC(V)

1. Perform operational check.
2. Ventilation should be performed using the Assist Control-Ventilation, or AC(V), only.
3. Initial ventilator settings at start-up
   A. Mode: AC(V)
   B. Breaths/Minute (BPM): 12
   C. Tidal Volume (Vt): 500 mL
   D. Positive End Expiratory Pressure (PEEP): 5 cm H_2O
   E. FiO_2: 21%
   F. Inspiratory:Expiratory (I:E) Ratio: 1:2.5
   G. High Peak Inspiratory Pressure (PIP): 35 cm H_2O
   H. Pressure Support (PS): N/A
4. The ventilator has an internal oxygen mixer, and oxygen should be connected to the device during transportation. When oxygen is connected, the default FiO_2 setting is 100%. FiO_2 should be adjusted as needed based on the patient's need for supplemental oxygen or physician's orders.
5. The settings listed are default only, and should be adjusted as necessary to maintain adequate patient ventilation. Whenever possible, obtain ventilator settings from a respiratory therapist or physician prior to using this device for interfacility transport.
7. Ventilator settings may be adjusted by pressing the soft key next to the desired setting to be changed, turning the rotary encoder in the center to the desired new setting, and pressing the green check mark to the right of the rotary encoder. Verify that new setting is accepted.

CPAP MODE – CPAP+NPPV

1. Perform operational check
2. A face mask with head strap must be used with this setting.
3. The ventilator will start up in Assist Control mode. To set ventilator to CPAP mode, press the soft key next to Mode and turn the rotary encoder to display CPAP. Confirm by pressing the green check mark.
4. Initial settings of CPAP mode:
   A. Mode: CPAP (NPPV+PS)
   B. BPM: N/A-Determined by patient self-ventilation
   C. Vt: N/A-Determined by patient self-ventilation
   D. PEEP: 5 cm H_2O
   E. FiO_2: 21%
   F. I:E Ratio: N/A-Determined by patient self-ventilation
   G. PIP: N/A-Determined by patient self-ventilation
   H. PS: 2 cm H_2O
5. To be in true CPAP mode, pressure support (PS) must be set to zero. Press and hold the soft key next to PIP for two seconds. Use rotary encoder to set pressure support value to 0 and press green check mark to confirm. CPAP+NPPV mode is now established with a PEEP setting of 5 cm H_2O.
6. The ventilator has an internal oxygen mixer, and oxygen should be connected to the device during transportation. When oxygen is connected, the default FiO_2 setting is 100%. FiO_2 should be adjusted as needed based on the patient's need for supplemental oxygen or physician's orders.
8. The settings listed are default only, and should be adjusted as necessary to maintain adequate patient ventilation. Whenever possible, obtain ventilator settings from a respiratory therapist or physician prior to using this device for interfacility transport.
9. Ventilator settings may be adjusted by pressing the soft key next to the desired setting to be changed, turning the rotary encoder in the center to the desired new setting, and pressing the green check mark to the right of the rotary encoder. Verify that new setting is accepted.
10. Verify that patient is able to tolerate new settings following any adjustment in CPAP mode.

BIPAP MODE – CPAP+NPPV+PS (INTERFACILITY TRANSPORT ONLY)

1. Perform operational check.
2. A face mask with head strap must be used with this setting.

3. The ventilator will start up in Assist Control mode. To set ventilator to BIPAP mode, press the soft key next to Mode and turn the rotary encoder to display CPAP. Confirm by pressing the green check mark.
4. Initial settings of CPAP mode:
   A. Mode: CPAP (NPPV+PS)
   B. BPM: N/A-Determined by patient self-ventilation
   C. Vt: N/A-Determined by patient self-ventilation
   D. PEEP: 5 cm H_2O
   E. FiO_2: 21%
   F. I:E Ratio: N/A-Determined by patient self-ventilation
   G. PIP: N/A-Determined by patient self-ventilation
   H. PS: 2 cm H_2O
5. The initial settings are default only. Setting for the patient to be placed on BIPAP for interfacility transport MUST be obtained from the sending facility respiratory therapist or physician.
6. When receiving orders from the sending hospital, values are typically providing as inspiratory and expiratory pressures. Expiratory pressure, or PEEP, may be set by pressing the soft key next to PIP and using the rotary encoder to select the desired value. Press the green check mark to confirm the new value for PEEP. This inspiratory pressure, or pressure support (PS), may be set by pressing and holding the soft key next to PIP for two seconds, and then using the rotary encoder to set the desired value for pressure support. Press the green check mark to confirm the new value. The inspiratory value minus the expiratory value provides the pressure support value. This method must be used as the AEV ventilator does not allow direct setting PIP values. Example:
   Hospital BIPAP Settings: *Inspiratory Pressure is 15 cm H_2O and Expiratory Pressure is 8 cm H_2O.*
   Impact AEV Settings for Transport: *PEEP: 8 (same as Expiratory Pressure)*
   PS: 7 (Inspiratory – Expiratory = Pressure Support)
   PIP: ≈ 15, may vary depending on patient ventilations
7. The ventilator has an internal oxygen mixer, and oxygen should be connected to the device during transportation. When oxygen is connected, the default FiO_2 setting is 100%. FiO_2 should be adjusted as needed based on respiratory therapist or physician orders.
8. BIPAP mode may not be used without orders from a respiratory therapist or physician.
9. Any change in ventilator settings while in BIPAP mode must be ordered by a respiratory therapist or physician. Ventilator settings may be adjusted by pressing the soft key next to the desired setting to be changed, turning the rotary encoder in the center to the desired new setting, and pressing the green check mark to the right of the rotary encoder. Verify that new setting is accepted.
10. Verify that patient is able to tolerate new settings following any adjustment in BIPAP mode.

PEDIATRIC

1. Consult Broselow Tape for recommended initial tidal volume and ventilation rates for children under 12 years of age for Assist Control mode. Adjust setting as needed based on patient compliance.
2. CPAP and/or BIPAP mode should not be used for patients under 12 years of age without orders from a respiratory therapist or physician.

SPECIAL NOTES

1. Once automated ventilation has been initiated, it should not be discontinued until the receiving facility is ready to take over respiratory management of the patient.
2. Monitor patient for signs of gastric distention. Be prepared for vomiting.
3. Vital signs must be obtained every 5 minutes while patient is receiving any form of therapy from the Impact ventilator.

END

Back to Index ↑

Medications

Adenosine

INTERMEDIATE, PARAMEDIC/CCTP/RN

DRUG ACTION: Slows conduction through AV node of the heart, half-life of less than 10 seconds.

INDICATIONS:

1. Conversion of paroxysmal supraventricular tachycardia (regular narrow complex tachycardia) to normal sinus rhythm (NSR).
2. Conversion of regular wide complex tachycardia (Ventricular tachycardia or uncertain).

CONTRAINDICATIONS:

1. Heart block.
2. Sick sinus syndrome, atrial fibrillation or atrial flutter.
3. Unstable, irregular, or polymorphic wide complex tachycardia.

PRECAUTIONS:

1. Frequently followed by several seconds of asystole. Provide emotional support to the patient.

ADVERSE REACTIONS/SIDE EFFECTS: (usually very short-lived)

1. Dyspnea and bronchoconstriction (especially in patients with asthma and COPD)
2. Palpitations and chest pain
3. Hypotension
4. Facial flushing and headache
5. At the time of conversion, a variety of new rhythms may appear on the ECG. Short-lasting first, second or third degree heart block or *transient* asystole may result after administration. Due to the drug's short half-life, these effects are *generally* self-limiting.
6. In doses of 6-12 mg, there are usually no hemodynamic side effects, i.e. hypotension.

ADMINISTRATION: *if trained and authorized*

1. Narrow complex tachycardia:
    a. 6 mg IV/IO bolus. Document effect on rhythm on ECG strip.
    b. If rhythm does not convert or does not slow enough to allow diagnosis, a dose of 12 mg may be given. A second dose of 12 mg may be administered as needed.
2. Regular Wide Complex Tachycardia:
    a. 6 mg IV/IO bolus. Document effect on rhythm on ECG strip.
    b. If rhythm does not convert or does not slow enough to allow diagnosis, a dose of 12 mg may be given. A second dose of 12 mg may be administered as needed.
3. Adenosine IV/IO injection must be given rapidly. This can be facilitated by: 1) using the IV/IO med port closest to the patient, 2) following the med with a fluid flush to assure all of the drug has cleared the IV tubing, 3) using a larger
4. Bore IV catheter, and 4) elevating the arm during administration.
5. Further orders must come from monitoring physician.

SPECIAL NOTES:

1. After the administration of adenosine, a rhythm other than PSVT may be evident, resulting in the choosing of a different form of treatment.

PEDIATRIC CONSIDERATIONS:

1. Do not give to patients < 12 years without physician order.
2. Dose is 0.1 – 0.2 mg/kg (max 12 mg. single dose) rapid IV or IO.

MONITOR, REPORT, DOCUMENT.

Monitor EKG and Vitals, Report to ED Staff, and document usage, dosage and changes in patient conditions.

END

Back to Index ↑

Albuterol

EMT, AEMT, INTERMEDIATE, PARAMEDIC/CCTP/RN

DRUG ACTION: Sympathomimetic bronchodilator (beta2-adrenergic agonist)

INDICATIONS:

1. For relief of acute bronchospasm (reversible airway obstruction)

CONTRAINDICATIONS:

1. Allergy or known hypersensitivity to albuterol

PRECAUTIONS:

1. Beta-receptor blocking agents and albuterol inhibit the effect of each other.
2. Use with caution in patients with heart disease, hypertension, diabetes, the elderly and those being treated with antidepressants.

ADVERSE REACTIONS/SIDE EFFECTS:

1. Hypertension and headache
2. Arrhythmias and chest pain
3. Nervousness and shakiness
4. Rare: May produce immediate allergic reactions or paradoxical bronchospasm, which can be life threatening. Discontinue treatment immediately if this occurs.

ADMINISTRATION: *if trained and authorized*

1. BLS with medication training:
    A. Pour one unit dose bottle (2.5 mg = 3 ml of 0.083% solution) into nebulizer reservoir.
    B. Connect nebulizer to oxygen source at 6 liters per minute.
    C. Have patient breathe as calmly and deeply as possible until no more mist is found in the nebulizer chamber.
    D. Continuous nebulizer treatments (with reassessment in between) may be given to all ages as indicated.
    E. Restart patient on oxygen at appropriate concentration.
2. ALS: Same as above except that Atrovent 500 mcg is added to the first (only) neb, unless contraindicated.
3. ALS: In the intubated patient, albuterol should be administered with an adapter that permits in-line nebulization.

PEDIATRIC CONSIDERATIONS:

1. BLS with medication training: Continuous nebs, at adult strength, may be given on standing order.
2. ALS: Continuous nebs (with Atrovent added to first neb) at adult strength, may be given on standing order.

SPECIAL NOTES:

1. May begin treatment prior to IV therapy. This may decrease anxiety in the patient.
2. Nebulizer treatments for patient with active tuberculosis should be performed in well-ventilated areas (outside patient compartment if possible). Providers should use appropriate respiratory protection.
3. ALS providers can provide in-line nebs during CPAP therapy as appropriate.

MONITOR, REPORT, DOCUMENT:
Monitor EKG and Vitals, Report to ED Staff, and document usage, dosage and changes in patient conditions.
END

Back to Index ↑

Amiodarone

INTERMEDIATE. PARAMEDIC/CCTP/RN

DRUG ACTION: Antiarrhythmic with multiple and complex effects on the electrical activity of the heart such as: 1) Delay in the rate at which the heart repolarizes. 2) A prolongation in the action potential of the heart. 3) A slowing of the electrical conduction. 4) A reduction in the SA nodes firing rate.
INDICATIONS:

1. Ventricular tachycardias (with and without a pulse)
2. Ventricular fibrillation (VF)
3. As prophylaxis following successful conversion of VF or VT or ICD firing
4. WPW and PSVT with physician order

CONTRAINDICATIONS:

1. Allergy or known hypersensitivity to Amiodarone or its components including iodine
2. Patients in cardiogenic shock
3. Sinus bradycardia and second or third degree AV block (be ready to pace if bradycardia occurs)

PRECAUTIONS:

1. Amiodarone may cause a worsening of existing arrhythmias or precipitate a new one.
2. May produce vasodilation and hypotension. May also have negative inotropic effects
3. Watch for prolongation of QT interval
4. Use with caution if renal failure is present due to *extremely long* ½ life.
5. May interact with beta-blockers such as atenolol, propranolol, Metoprolol, or certain calcium-channel blockers such as verapamil or diltiazem, resulting in excessively slow heart rates.

ADVERSE REACTIONS/SIDE EFFECTS:

1. Hypotension, bradycardia, and arrhythmias
2. Prolonged QT interval
3. Cardiac arrest

ADMINISTRATION: *if trained and authorized*
Patient must be on ECG monitor and Vital signs should be monitored at least every 5 minutes.

1. **VF/ Pulseless VT**: Administer 300 mg IV/IO push. Repeat 150 mg IV/IO after 3-5 minutes.
2. **VT with a pulse:** Administer an initial bolus of 150 mg IV/IO slowly (2-3 min). Dilute into 100cc NS. May repeat 150 mg IV/IO push in 10 minutes.
3. **Wide QRS Complex Rhythms:** Administer Amiodarone 150 mg IV/IO slowly (over 5-10 minutes).
4. **Maintenance drip** is utilized after conversion from dysrhythmia.
5. **Maintenance drip:** Usual dose is 0.5-1.0 mg/minute (Maximum dose 2.2 grams/24 hours). Due to potential drug incompatibilities, other drugs should NOT be administered through the same IV line.
6. Observe the IV site for signs of infiltration. If infiltration occurs, restart the IV line as soon as possible.

PEDIATRIC CONSIDERATIONS:

A. As an antiarrhythmic in Pediatrics: (Do not use in neonates!)
B. Initial bolus of 5 mg/kg IV/IO over 20-60 minutes. Contact MC if possible first.
C. VF/Pulseless VT: 5mg/kg IV/IO push

SPECIAL NOTES:

1. Draw up slowly w/18ga. Needle or Amiodarone will foam rendering it unstable. Flush line after use.

MONITOR, REPORT, DOCUMENT:
Monitor EKG and Vitals, Report to ED Staff, and document usage, dosage and changes in patient conditions. Vital signs before and within 5 minutes after.
END

Back to Index ↑
Back to Index ↑

Aspirin (Acetylsalicylic Acid, ASA)

EMT, AEMT, INTERMEDIATE, PARAMEDIC/CCTP/RN

DRUG ACTION: Analgesic; anticoagulant that slows the blood clotting mechanism in the body, and may help to reduce the damage caused by an acute myocardial infarction

INDICATIONS:

1. Suspected cardiac ischemia

CONTRAINDICATIONS:

1. Allergy to aspirin or other non-steroidal anti-inflammatory agents (includes many non-aspirin/non-Tylenol™ pain relievers such as Advil and Aleve)
2. Active GI bleeding
3. Aortic dissection

PRECAUTIONS:

1. Recent internal bleeding (within last 3 months)
2. Known bleeding diseases
3. Recent surgery
4. Possibility of pregnancy
5. Allergies to ANY pain medication
6. Patients with a history of asthma may take if they have tolerated ASA in the past and are not currently having asthma- related symptoms.

ADVERSE REACTIONS/SIDE EFFECTS:

1. Bleeding

ADMINISTRATION: *if trained and authorized*
1. Have the patient chew 324 mg (children's) aspirin. Carried in easy dissolve powder packets.

PEDIATRIC CONSIDERATIONS:
1. Do not give to patients < 12 years without physician order.

SPECIAL NOTES:
1. It is unnecessary to administer aspirin to a patient that has taken it within the last 12 hours. If unsure, it is preferable to administer aspirin as above.
2. Being on current anticoagulant therapy (e.g. Coumadin) is not necessarily a reason to withhold aspirin. Consult with Medical Control Physician if there are questions.

MONITOR, REPORT, DOCUMENT
Monitor EKG and Vitals, Report to ED Staff, and document usage, dosage and changes in patient conditions.
END

Back to Index ↑

Atropine

INTERMEIDATE, PARAMEDIC/CCTP/RN

DRUG ACTIONS: Antiarrhythmic, anticholinergic (parasympatholytic)-antimuscarinic; blocks action of acetylcholine in parasympathetic nervous system.

INDICATIONS:
- For symptomatic bradyarrhythmias (< 50/minute)
- In RSI, to pre-treat bradycardia in children.
- AV block with narrow QRS complex.
- Organophosphate poisoning.
- Bradycardia due to beta-blocker and/or calcium channel blocker overdose/toxicity.

CONTRAINDICATIONS:
- Acute hemorrhage.
- Hyperthermia (relative)

ADVERSE REACTIONS/SIDE EFFECTS:
- Supraventricular or ventricular tachycardia, ventricular fibrillation.
- Blurred vision, dry eyes, dilated pupils.

ADMINISTRATION CONSIDERATIONS:
- Should be given rapidly to avoid paradoxical effect.
- Note that doses for organophosphate poisoning may be considerably larger than standard dosing.

- Atropine is no longer indicated in the ACLS algorithm for asystole/PEA
- Second degree and complete heart block are generally unresponsive to atropine. In these situations, external pacing is the treatment of choice.

DOSING:

- **ADULT**
  - Perfusing Symptomatic Bradycardia: 0.5mg IV or IO. If not effective after 5 minutes, give a second dose of 0.5mg for a total of 1mg (standing order)
  - (Physician Order Only) Organophosphate Poisoning: Contact medical control for dosing

- ⍟ **PEDIATRIC**
  - Perfusing Symptomatic Bradycardia: 0.02mg/kg IV or IO (standing order)
  - Premedication Prior to Sedation in RSI for Children <7 Years of Age: 0.02mg/kg IV or IO *with a minimum dose of 0.1mg and maximum dose of 0.5mg* (standing order)
  - (Physician Order Only) Organophosphate Poisoning: Contact medical control for dosing

Back to Index ↑

Back to Index ↑

Brilinta™ (Ticagrelor)

PARAMEDIC/CCTP/RN

DRUG ACTION: Ticagrelor is a P2Y12 platelet inhibitor indicated to reduce the rate of thrombotic cardiovascular events in patients with ACS. For patients with ST-segment elevation acute myocardial infarction, Brilinta has been shown to reduce the rate of a combined endpoint of cardiovascular death of death, re-infarction, or stroke compared to clopidogrel. Brilinta is preferred over Plavix.

INDICATIONS:

1. Level I: ST-segment elevation myocardial infarction (STEMI)

PRECAUTIONS:

1. Liver disease

CONTRAINDICATIONS:

1. Active pathologic bleeding (peptic ulcer)
2. Hypersensitivity to drug
3. Recent history of GI bleed
4. Recent Trauma
5. Intracranial hemorrhage History

ADVERSE REACTIONS/SIDE EFFECTS:

1. Hemorrhage
   - Significant and sometimes fatal bleeding may occur;
   - Do not start in patients planned to undergo urgent CABG;
   - Discontinue treatment >5 days prior to any surgery;
   - suspect bleeding in any hypotensive patient who has recently undergone coronary angiography, PCI, CABG, or other surgery;

2. Dyspnea ; is normal in 14% of all cases; will clear up within minutes
3. Like other antiplatelet agents, can cause significant, sometimes fatal, bleeding

ADMINISTRATION: *if trained and authorized*
1. The recommended adult dosage of Brilinta in patients with acute coronary syndrome and STEMI is 180mg. P.O. (Two 90mg. Tablets).

PEDIATRIC CONSIDERATIONS:
1. Not to be used.

MONITOR, REPORT, DOCUMENT: Continuous EKG and Vital signs within 5 minutes after administration.

END

Calcium Chloride

PARAMEDIC/CCTP/RN

DRUG ACTION: Electrolyte modifier; essential for the transmission of nerve impulses in cardiac muscle contraction

INDICATIONS:
1. Symptomatic hyperkalemia
2. Hypocalcaemia, especially from acute causes such as Hydrofluoric acid or fluorine gas exposure
3. Calcium channel blocker overdose or toxicity; including: verapamil (Calan, Isoptin), diltiazem (Cardizem), nifedipine (Procardia, Adalat), nicardipine (Cardene, Vasonase), nimodipine (Nimotop), amlodipine, felodipine, flunarizine, bepridil, isradipine, nisoldapine, nitrendapine
4. Respiratory depression following administration of magnesium sulfate

CONTRAINDICATIONS:
1. Not to be used during resuscitation unless hyperkalemia, hypocalcaemia, or calcium channel blocker toxicity has been proven.

PRECAUTIONS:
1. Rapid administration of calcium in a beating heart may produce slowing of the cardiac rate.
2. Patients taking digitalis may have increased ventricular irritability and calcium may produce digitalis toxicity.
3. In the presence of sodium bicarbonate, it will precipitate calcium salts or carbonates.
4. Do not give to any patient without Medical Control Physician order.

ADVERSE REACTIONS/SIDE EFFECTS:
1. Syncope
2. Arrhythmias, bradycardia, and cardiac arrest

3. Tissue necrosis at injection site

ADMINISTRATION: *if trained and authorized*
1. Obtain physician order for all indications.
2. Dosage in adults: 500-1000 mg of 10% solution (1.0 ml = 100 mg).
3. Administer over 2-5 minutes in a critical situation.

PEDIATRIC CONSIDERATIONS:
1. Do not give to patients < 12 years without physician order.
2. Initial dose is 0.2 ml/kg (20 mg/kg) *slowly* IV or IO. Repeat doses for peds are not recommended.

SPECIAL NOTES:
1. If infiltration occurs, notify physician at receiving hospital immediately upon arrival so that antidotal therapy can begin immediately.

MONITOR, REPORT, DOCUMENT:
1. Continuous ECG
2. Vital signs before and within 5 minutes after administration

END

Back to Index ↑
Back to Index ↑

Dextrose 50%

AEMT, INTERMEDIATE, PARAMEDIC/CCTP/RN

DRUG ACTION: Hyperglycemic; increases circulating blood sugar levels

INDICATIONS:
1. Suspected or known hypoglycemia (BS < 70 mg/dL)

CONTRAINDICATIONS:
1. Intracranial hemorrhage

PRECAUTIONS:
1. May cause CNS symptoms in the alcoholic patient.

2. Should not be used as a diagnostic agent in the patient with altered LOC unless the BS is known to be < 70 mg/dL or, if the BS cannot be determined, patient is known to be diabetic.
3. If CVA or head trauma is suspected as the cause of altered mental status, contact medical control physician prior to administration.

ADVERSE REACTIONS/SIDE EFFECTS:
1. May aggravate HTN and CHF
2. May cause tissue necrosis at injection site if infiltration occurs

ADMINISTRATION: *if trained and authorized*
1. Blood sugar between 40 and 70mg/dL in a conscious, alert patient.
    A. Administer 1 amp 50% dextrose orally or ½ amp IV/IO and recheck a blood sugar. Administer remaining amp if no change.
2. Blood sugar < 40 mg/dL with or without altered LOC:
    A. Establish IV/IO of NS TKO in large vein.
    B. Administer $D_{50}W$ (25 grams) IV/IO
3. Repeat BS measurement.

PEDIATRIC CONSIDERATIONS:
1. Do not give to patients < 12 years without Medical Control Physician order.
2. For infants between 1 month and 2 years old:
    A. Initial dose is 0.5 -1.0g/kg IV/IO of 25% dextrose in water ($D_{25}W$). $D_{50}W$ must be diluted 1:1 with NS to achieve $D_{25}W$.
4. For neonates between birth and 29 days old:
    A. 5-10 cc/kg IV/IO of ($D_{10}W$) over 20 minutes. $D_{50}W$ must be diluted 1:4 with NS to achieve $D_{10}W$.

SPECIAL NOTES:
1. All patients whose hypoglycemia is due to oral hypoglycemic agents should be transported. Medical Control Physician consult required before patient can refuse transport.
2. If infiltration occurs, notify physician at receiving hospital immediately upon arrival so that antidotal therapy can begin immediately.

MONITOR, REPORT, DOCUMENT:
1. Changes in level of consciousness Blood sugar before and after treatment
2. Vital signs within 5 minutes after administration

END

Back to Index ↑

Dextrose – Oral: (Glucose *generic*, Glutose *brand*)

EMR/EMT, AEMT, INTERMEDIATE, PARAMEDIC/CCTP/RN

DRUG ACTION: Hyperglycemic; increases circulating blood sugar levels

INDICATIONS:
1. Suspected or known hypoglycemia (BS < 70 mg/dL)

CONTRAINDICATIONS:
1. Intracranial hemorrhage

PRECAUTIONS:
1. Airway must be carefully maintained.

2. Should not be used as a diagnostic agent in the patient with altered LOC unless the BS is known to be < 70 mg/dL or, if the BS cannot be determined, patient is known to be diabetic.

ADMINISTRATION: *if trained and authorized*

1. Logroll patient to prevent aspiration and place in the recovery position.
2. Check blood sugar.
3. Administer 1 tube (Approximately 25 - 31 gm per tube) in downside cheek of log-rolled patient.
4. Administer slowly, monitoring absorption. Maintain adequate airway.
5. Repeat BS measurement.
6. Further orders must come from monitoring physician.

PEDIATRIC CONSIDERATIONS:

1. The initial dosage is one half of the adult dose.

SPECIAL NOTES:

1. All patients whose hypoglycemia is due to oral hypoglycemic agents should be transported. Medical Control Physician consult required before patient can refuse transport.
2. BLS: In patients with decreased level of consciousness from hypoglycemia, glucagon is considered first-line treatment.
3. ALS: In patients with BS < 40 mg/dL, IV/IO dextrose and/or glucagon are considered first/second line treatment.

MONITOR, REPORT, DOCUMENT:

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

END

Back to Index ↑

Diazepam (Valium)

INTERMEDIATE, PARAMEDIC/CCTP/RN

DRUG ACTION:

1. Central nervous system depressant
2. Muscle relaxant

INDICATIONS FOR USE:

1. Continuous or recurrent seizures, status epilepticus
2. Sedation for procedures

CONTRAINDICATIONS:

1. Allergy to the drug

2. Hypotension
3. Altered level of consciousness
4. Intoxication

SIDE EFFECTS:
1. Hypotension
2. Rash
3. Respiratory depression
4. Bradycardia

SPECIAL NOTES:
1. Controlled substance, addictive
2. Pregnancy category D

ADMINISTRATION: *if trained and authorized*
1. Adult: 2-5 mg IV/IM, (rectally if unable to establish an IV line)
2. Pediatric:
    a. 0.05-0.1 mg/kg IV/IM, maximum of 8 mg
    b. 0.5 mg/kg rectally, maximum of 20 mg
    c. Can use an equal dose of Diastat (rectal diazepam gel)

MONITOR, REPORT, DOCUMENT:
1. Vital signs and respiratory assessment within 5 minutes after administration
2. Altered level of consciousness
3. Seizure activity
4. Controlled substance. Must be recorded according to policy.

END

Back to Index ↑

Diltiazem (Cardizem)

PARAMEDIC/CCTP/RN

DRUG ACTION:
1. Calcium Channel Blocker, Calcium Channel Antagonist

INDICATIONS FOR USE:
1. Atrial Fibrillation with rapid ventricular rate (greater than 160/minute)
2. Atrial Flutter with rapid ventricular rate (greater than 160/minute)
3. Multifocal Atrial Tachycardia with rapid ventricular rate (greater than 160/minute)
4. Paroxysmal Supraventricular Tachycardia (PSVT) with rapid ventricular rate, greater than 160/minute

CONTRAINDICATIONS:
1. Sick Sinus Syndrome

2. Second or Third- Degree AV block
3. Severe Hypotension
4. Cardiogenic Shock
5. Atrial Fibrillation or Atrial Flutter associated with WPW syndrome
6. Use of IV Beta Blockers
7. Ventricular Tachycardia
8. Wide-Complex Tachycardia of unknown origin

SIDE EFFECTS:

1. Chest Pain
2. Bradycardia
3. Congestive Heart Failure
4. Syncope
5. Ventricular Dysrhythmias
6. First and Second- Degree AV blocks
7. Nausea and Vomiting
8. Atrial Flutter

SPECIAL NOTES:

1. For use with on-line medical control order only (no standing orders)
2. Pregnancy Safety- Category C (generally considered safe for use during labor)
3. Use with caution in patients with impaired renal or hepatic function Hypotension may occasionally result – usually related to rate of delivery
4. PVC's may be present on conversion of PSVT to sinus rhythm
5. Treatment of resultant hypotension: Calcium Chloride (100mg/ml) 2mg/kg IVP (usually 2ml)

ADMINISTRATION: *if trained and authorized*

1. Adult: Start with 10mg dose IVP over 2 min. Re-evaluate, Repeat if needed. Maximum initial dose = 0.25mg/kg (usual concentration = 25mg/5ml)
2. Pediatric: Not recommended

MONITOR, REPORT, DOCUMENT:

1. 12 Lead EKG strip before administration and after administration
2. Vital signs within 5 min of administration
3. Watch for Bradycardia and Hypotension, and any Heart Blocks

END

Back to Index ↑

Diphenhydramine (Benadryl™)

PARAMEDIC/CCTP/RN

DRUG ACTION: Antihistamine (H_1 receptor antagonist); blocks the effects of histamine

INDICATIONS:

1. In anaphylaxis, as an adjunct to epinephrine
2. In allergic reactions, if epinephrine is contraindicated
3. Combative/aggressive patients
4. Extrapyramidal (Parkinsonian-like, thick tongue, neck distortion) symptoms associated with Compazine administration

CONTRAINDICATIONS:

1. Allergy or known hypersensitivity to diphenhydramine HCL
2. Acute asthma attacks
3. Newborn or premature infants

PRECAUTIONS:
1. Benadryl has an atropine-like action, therefore use with caution in patients with bronchial asthma, hyperthyroidism, cardiovascular disease, hypertension, and COPD.

ADVERSE REACTIONS/SIDE EFFECTS:
1. Drowsiness and sedation
2. Dizziness and headache
3. Blurred vision
4. Palpitations and chest tightness
5. Wheezing and thickening of bronchial secretions
6. Hypotension
7. Hallucinations, paradoxical excitement and convulsions (especially in children)

ADMINISTRATION: *if trained and authorized*
1. For anaphylaxis or allergic reactions: Administer Benadryl 25 mg IV/IO or 50 mg deep IM.
2. For extrapyramidal symptoms associated with Compazine administration: Obtain physician order.
3. Further orders must come from Medical Control Physician.

PEDIATRIC CONSIDERATIONS:
1. Do not give to patients < 12 years without physician order.
2. Initial dose is 1.0 mg/kg slow IV/IO or deep IM.

SPECIAL NOTES:
1. Benadryl in the injectable form has a rapid onset of action.
2. IV route is preferred. Deep IM route can be used if unable to establish an IV.

MONITOR, REPORT, DOCUMENT:
Vital signs within 5 minutes after administration

END

Back to Index ↑

Dopamine Drip (Dopastat, Intropin)

PARAMEDIC/CCTP/RN

DRUG ACTION: Chemical precursor of norepinephrine that stimulates dopaminergic, $\beta 1$ -adrenergic, and α-adrenergic receptors in a dose-related fashion; inotropic, vasopressor; increases BP and cardiac output, and improves blood flow through the kidneys

INDICATIONS:
1. Symptomatic hypotension in the absence of hypovolemia

CONTRAINDICATIONS:
1. Hypotension due to hypovolemia

ADVERSE REACTIONS/SIDE EFFECTS:
1. Arrhythmias (supraventricular or ventricular tachycardia), palpitations and chest pain
2. Dyspnea
3. Hypotension

4. Dilated pupils
5. Tissue necrosis at IV site

ADMINISTRATION: *if trained and authorized*

1. Comes prepared 400 mg dopamine in 250 ml D_5W bags (1600 mcg/ml). May infuse 2-20 micrograms/kg/min titrated to satisfactory hemodynamic performance.
2. When administering a dopamine infusion, **a Buretrol with 60 gtt tubing must be used**.

For **400 mg dopamine hydrochloride in 250 ml D_5W bags (1600 mcg/ml):**

Patient Weight	To administer 5 mcg/kg/min run 60 gtt tubing @:	To administer 10 mcg/kg/min run 60 gtt tubing @:	To administer 15 mcg/kg/min run 60 gtt tubing @:	To administer 20 mcg/kg/min run 60 gtt tubing @:
50 kg or 110 lb.	9 gtts/min.	18 gtts/min.	28 gtts/min.	38 gtts/min.
60 kg or 132 lb.	11 gtts/min.	22 gtts/min.	34 gtts/min.	45 gtts/min.
70 kg or 154 lb.	13 gtts/min.	26 gtts/min.	39 gtts/min.	53 gtts/min.
80 kg or 176 lb.	15 gtts/min.	30 gtts/min.	45 gtts/min.	60 gtts/min.
90 kg or 198 lb.	18 gtts/min.	34 gtts/min.	51 gtts/min.	68 gtts/min.
100 kg or 220 lb.	19 gtts/min.	37 gtts/min.	56 gtts/min.	75 gtts/min.
110 kg or 242 lb.	21 gtts/min.	41 gtts/min.	62 gtts/min.	83 gtts/min.
120 kg or 242 lb.	23 gtts/min	45 gtts/min.	68 gtts/min.	90 gtts/min.

PEDIATRIC CONSIDERATIONS:

1. May infuse 2-10 micrograms/kg/min titrated to satisfactory hemodynamic performance prior to medical control contact.

SPECIAL NOTES:

1. If infiltration occurs, discontinue medication and notify physician at receiving hospital immediately upon arrival so that antidotal therapy can begin immediately.

MONITOR, REPORT, DOCUMENT: Continuous EKG and Vital signs within 5 minutes after administration

END

Back to Index ↑

Back to Index ↑

Epinephrine 1:1,000 (Adrenaline)

EMT, AEMT, INTERMEDIATE, PARAMEDIC/CCTP/RN

DRUG ACTION: Stimulates both α and β receptors; bronchodilator, cardiac stimulator, and peripheral vasoconstrictor

INDICATIONS:

1. Allergic reaction from stings, and ingested, inhaled, injected, or absorbed allergens resulting in the following: increased heart rate, decreased BP, respiratory distress, hives, facial or airway swelling.
2. Anaphylaxis with evidence of difficulty communicating, muscle retraction, nasal flaring, and/or swelling of tongue or throat.
3. Asthma, as a second line treatment after nebulization

CONTRAINDICATIONS:

1. None during Anaphylaxis.
2. Do not administer IV bolus.

ADVERSE REACTIONS/SIDE EFFECTS:

1. Nervousness, restlessness, and tremors
2. Headache and HTN
3. Arrhythmias and angina

ADMINISTRATION: *if trained and authorized*

BLS Providers

1. For severe reactions (anaphylactic shock or impending respiratory): Administer 0.5 mg 1:1000 epinephrine IM. Obtain MD order before administering epinephrine in patients <12 or > 40 years.

ALS Providers:

1. For non-severe reactions (no anaphylactic shock or impending respiratory or cardiac arrest): 0.3 mg (0.3 cc of 1:1000 solution) IM may be given to patients. Consider follow up with Benadryl 25 mg IV or 50 mg IM.
2. For acute asthma attack, if albuterol neb(s) have been unsuccessful: 0.3 mg (0.3 cc of 1:1000 solution) SQ may be given to patients.
3. An epinephrine drip should only be established on physician order. When administering an epinephrine infusion, a Buretrol with 60 gtt tubing should be used.
4. To mix a drip, add 1 mg of epinephrine 1:1000 to 500 cc NS (2 mcg/cc). The initial dose for adults is 1 mcg/min titrated to desired hemodynamic response (2 - 10 mcg/min).

Infusion rate	gtts/min (w/ 60 gtt tubing):
1 mcg/min	30 gtts/min

PEDIATRIC CONSIDERATIONS:

1. For severe reactions May administer 0.01 mg/kg (ml/kg) IM prior to physician contact.
2. For acute asthma attacks with unsuccessful neb treatment: Administer 0.01 mg/kg IV/IO/IM.

SPECIAL NOTES:

1. IV administration is the route of choice for anaphylactic shock and if given, should be administered in the 1:10,000 concentration, however, if IV access is not readily obtainable, the 1:1000 concentration may be given IM.

MONITOR, REPORT, DOCUMENT:

1. Breath sounds, vital signs within 5 minutes after administration
2. Effect on heart rate
3. Continuous ECG monitoring

END

Back to Index
↑

Epinephrine 1:10,000 (Adrenaline)

INTERMEDIATE, PARAMEDIC/CCTP/RN

DRUG ACTION: Stimulates both α - and β - adrenergic receptors; bronchodilator, cardiac stimulator, and peripheral vasoconstrictor

INDICATIONS:
1. Cardiac arrest rhythms: VF, pulseless VT, asystole, and pulseless electrical activity (PEA)
2. Severe anaphylaxis or asthma

CONTRAINDICATIONS:
1. None during cardiac arrest or profound anaphylaxis

PRECAUTIONS:
1. In severe anaphylaxis, may only be given IV/IO on standing order.
2. May precipitate with sodium bicarbonate if tubing is not flushed between drugs.

ADVERSE REACTIONS/SIDE EFFECTS:
1. Nervousness, restlessness, and tremors
2. Headache and HTN
3. Arrhythmias and angina
4. May induce or exacerbate ventricular ectopy, especially in patients receiving digitalis

ADMINISTRATION: *if trained and authorized*
1. Adult cardiac arrest (V-fib, V-tach, asystole, PEA):
    A. Administer 1 mg IV/IO push and circulate with CPR.
    B. Follow drug administration with defibrillation if indicated.
    C. May repeat 1.0 mg IV/IO every 3-5 minutes if rhythm has not converted.
2. Severe anaphylaxis:
    A. If impending respiratory or cardiac arrest, administer 0.3-0.5 mg (3-5 cc) IV/IO.
3. Further orders and orders for severe asthma must come from Medical Control Physician.

PEDIATRIC CONSIDERATIONS:
1. In cardiac arrest: Refer to the weight based resuscitation tape and administer one dose of 0.01 mg/kg IV/IO push every 3-5 minutes.
2. Severe anaphylaxis: Administer 0.01 mg/kg (up to 0.5 mg) IV/IO

SPECIAL NOTES:
1. For infusion (physician order only), use epinephrine 1:1000 concentration.

MONITOR, REPORT, DOCUMENT:
1. Breath sounds, vital signs within 5 minutes after administration
2. Effect on heart rate
3. Continuous ECG monitoring

END

Back to Index ↑

Epinephrine Racemic

PARAMEDIC/CCTP/RN

DRUG ACTION: Stimulates both α - and β - adrenergic receptors; bronchodilator, and helps relieve the subglottic edema with laryngotracheobronchitis (Croup). Racemic Epinephrine causes local effects on the upper airway as well as systemic effects from absorption. **Given only by inhalation.**

INDICATIONS:
1. Moderate to severe laryngotracheobronchitis (croup)
2. Bronchial asthma
3. Laryngeal edema

CONTRAINDICATIONS:
1. Epiglottitis (do not attempt to examine the back of the throat).
2. Hypertension
3. Significant underlying cardiovascular disease

PRECAUTIONS:
1. Mask and noise may be frightening to small children. Agitation will aggravate symptoms.
2. Should only be used once prehospital. Excessive use may cause bronchospasms
3. May develop "rebound worsening" within 30-60 minutes
4. M.A.O. inhibitors may potentiate the effect of this medication.

ADVERSE REACTIONS/SIDE EFFECTS:
1. Nervousness, restlessness, and tremors
2. Headache
3. Tremors
4. Tachycardia
5. Dysrhythmias, palpitations and angina
6. Nausea/vomiting

ADMINISTRATION: *if trained and authorized*
1. Adult: >40 kg: Do not give to adult patients
2. Child: <40 kg: Add 0.5 ml of racemic epinephrine in 2 ml of saline placed into nebulizer reservoir.
3. Connect nebulizer to oxygen source at 6 or 8 liters per minute.
4. Restart patient on oxygen at appropriate concentration after nebulizer is finished.

SPECIAL NOTES:
1. Effects can last from 90-120 minutes.
2. Nebulizer treatment may cause blanching of the skin in the mask area due to local epinephrine absorption.
3. If respiratory arrest occurs, it is most likely due to fatigue, not obstruction.
4. **Patient must be transported after receiving Racemic Epinephrine.**

MONITOR, REPORT, DOCUMENT:
1. Breath sounds, vital signs within 5 minutes after administration
2. Effect on heart rate
3. Continuous ECG monitoring

END

Back to Index ↑

Etomidate (Amidate)

PARAMEDIC/CCTP/RN

DRUG ACTION: Nonbarbiturate hypnotic and general anesthetic without analgesic activity; has a minimal effect on myocardial activity, BP and respirations; onset: 30 – 60 seconds; duration: 3 – 5 min.

INDICATIONS:

- For general anesthesia in conjunction with pharmacological paralysis in rapid sequence induction (RSI) in patients who have a systolic BP ≥ 80.
- Sedation for synchronized cardioversion

CONTRAINDICATIONS:

- Hypersensitivity
- Systolic BP < 80 (adults)
- Labor and delivery

ADVERSE REACTIONS/SIDE EFFECTS:

- Hypotension
- Transient pain at IV site
- Transient clonic jerking of skeletal muscle
- Nausea and/or vomiting
- Hiccoughs
- Laryngospasm
- Transient adrenal suppression (seen mostly with repeat dosing)
- Allergic reactions (rare)

ADMINISTRATION CONSIDERATIONS:

- Be prepared to maintain airway and assist ventilations
- Make sure all RSI medications are prepared prior to induction.

DOSING:

- ADULT
  - RSI: 0.3mg/kg IV or IO rapid bolus (standing order)
  - Cardioversion: 0.2mg/kg IV or IO rapid bolus (standing order)
- ⍟ PEDIATRIC
  - 0.3mg/kg IV or IO rapid bolus (standing order)

END

Back to Index ↑

Fentanyl Citrate

PARAMEDIC/CCTP/RN

DRUG ACTION: Binds with opiate receptors in the CNS altering the perception of and emotional response to pain.

INDICATIONS:
1. Musculoskeletal pain
2. Burns
3. Chest pain

CONTRAINDICATIONS:
1. Allergy or known hypersensitivity to Fentanyl
2. Hypotension (systolic BP < 90 systolic in adults)

PRECAUTIONS:
1. Use with caution in asthma, COPD, hepatic or renal disease and bradyarrhythmias.
2. Because this drug can decrease respirations, be prepared to assist ventilations and to administer the narcotic antagonist Naloxone (Narcan).
3. May cause skeletal and/or thoracic muscle rigidity if given rapidly.

ADVERSE REACTIONS/SIDE EFFECTS:
1. Respiratory depression, apnea, sedation, and confusion
2. Bradycardia
3. Seizures may occur
4. Hypertension or hypotension
5. Dry eyes, blurred vision, and vomiting

ADMINISTRATION: *if trained and authorized*

ADULT DOSING -			
Indication	**Intravenous/Intraosseous**	**Intramuscular (IM)**	**Intranasal (IN)**
Pain control	2 mcg/kg up to 100 mcg	2 mcg/kg up to 100 mcg	2 mcg/kg (½ of the dose delivered in each nostril)

PEDIARTIC DOSING - INITIAL			
Indication	**Intravenous/Intraosseous**	**Intramuscular (IM)**	**Intranasal (IN)**
Pain control	2 mcg/kg up to 30 mcg	2 mcg/kg up to 50 mcg	2 mcg/kg (½ of the dose delivered in each nostril)

SPECIAL NOTES:
1. If respiratory depression or hypotension occurs after using, ventilate the patient and administer 2 mg of naloxone (Narcan) IV/IO push.
2. Fentanyl is a controlled substance and its use must be documented according to the "Controlled Substance" policy.
3. The maximum fluid volume for IN delivery is 1 cc per nostril.

PEDIATRICS: Patients < 12 years may be given an initial dose of 2 mcg/kg on standing order.

MONITOR, REPORT, DOCUMENT:
Vital signs, response to medication
END

Back to Index ↑

Back to Index ↑

Furosemide (Lasix)

INTERMEDIATE, PARAMEDIC/CCTP/RN

DRUG ACTION:
1. Diuretic

INDICATIONS FOR USE:
1. Not recommended for routine pre-hospital treatment of acute congestive heart failure/pulmonary edema unless diagnosis of CHF/pulmonary edema confirmed

CONTRAINDICATIONS:
1. Allergy to the drug
2. Anuria (no urine output, e.g. dialysis patient) Hypotension (Systolic BP less than 90 mmHg)

SIDE EFFECTS: Hypotension Rash

SPECIAL NOTES:
1. Long term use can result in electrolyte imbalance and dehydration
2. Use with caution in patients with allergy to sulfa drugs
3. Pregnancy category C

ADMINISTRATION: *if trained and authorized*
1. 40 mg IV bolus

MONITOR, REPORT, DOCUMENT:
1. Daily maintenance dose
2. Vital signs, respiratory assessment within 5 minutes after administration
3. Any urinary output

END

Back to Index ↑

Back to Index ↑

Glucagon

EMT, AEMT, INTERMEDIATE, PARAMEDIC/CCTP/RN

DRUG ACTION: Antihypoglycemic; converts stored liver glycogen to glucose, resulting in ↑ circulating blood sugar.

INDICATIONS:

1. Suspected or known hypoglycemia (BS < 70 mg/dL) in diabetic patents, if symptomatic and IV cannot be established.
2. Beta blocker overdose or toxicity; including: acebutolol (Sectral), alprenolol, atenolol (Tenormin), betaxolol (Betoptic, Kerlone), bevantolol, bisoprolol, carteolol (Cartrol), flestolol, labetalol (Normadyne, Trandate), levobumolol (Betagan), Metorolol (Lopressor), nadolol (Corgard), oxprenolol, penbutolol (Levatol), pindolol(Visken), propranolol (Inderal, Blocadren, Timoptic), sofalol, timolol.
3. Calcium channel blocker overdose or toxicity; including: verapamil (Calan, Isoptin), diltiazem (Cardizem), nifedipine (Procardia, Adalat), nicardipine (Cardene, Vasonase), nimodipine (Nimotop), amlodipine, felodipine, flunarizine, bepridil, isradipine, nisoldapine, nitrendapine.

CONTRAINDICATIONS:

1. Allergy or known hypersensitivity to glucagon

ADVERSE REACTIONS/SIDE EFFECTS:

1. Occasional nausea and vomiting

ADMINISTRATION: *if trained and authorized*

1. Hypoglycemia:
    A. Glucagon comes with one unit (1 mg) of powdered glucagon and 1 ml of diluting solution.
    B. Inject diluting solution into powdered glucagon vial. Shake gently until solution is clear and draw up medication into syringe.
    C. Inject SQ or IM into abdomen, buttocks, thigh or upper arm.
    D. Turn patient to one side in case vomiting should occur.
    E. If patient wakes up and is able to swallow, give a fast acting carbohydrate immediately.

F. Repeat blood glucose measurement.

2. For overdose or toxicity, consult with medical control physician.

PEDIATRIC CONSIDERATIONS:

1. Do not give to patients < 12 years without physician order.
2. For children < 20kg, administer half the adult dose.

SPECIAL NOTES:

1. ALS: For severe hypoglycemia (blood sugar < 40 mg/dL), 50% dextrose IV/IO is treatment of choice.
2. BLS with medication training: In the patient with decreased LOC, glucagon is preferred over oral dextrose.
3. For conscious patients, simple, oral carbohydrates are most effective.
4. If the family has already given patient glucagon, a dose may be administered prior to Medical Control Physician contact if still unconscious after 15 minutes.
5. All patients whose hypoglycemia is due to oral hypoglycemic agents should be transported.

MONITOR, REPORT, DOCUMENT:
Vital signs, response to medication

END

Back to Index ↑

Haloperidol (Haldol)

PARAMEDIC/CCTP/RN

DRUG ACTIONS: Antipsychotic. Acts on CNS to depress subcortical areas, mid-brain and ascending Reticular Activating System.

INDICATIONS:

1. Acute psychotic disorders including manic states, drug-induced psychoses and schizophrenia.
2. Severe behavior problems in children (only after obtaining orders from Medical Control Physician)

CONTRAINDICATIONS:

1. Allergy or known hypersensitivity to Haloperidol.
2. Agitation secondary to hypoxia or shock.

PRECAUTIONS:

1. Be prepared to ventilate the patient and support cardiovascular system.
2. Use with caution when used concomitantly with barbiturates, narcotics, and/or any other CNS depressants.
3. Use with extreme caution, or not at all, in clients with Parkinsonism.
4. Obtain physician order before administering to any patient with hypotension (BP < 90 systolic).

ADVERSE REACTIONS/SIDE EFFECTS:

1. May cause mental, respiratory and cardiovascular depression.
2. Hypotension
3. ECG changes (torsades de pointes) with IV use.

ADMINISTRATION *if trained and authorized*:

1. Ensure safety of the patient and EMS providers.
2. Prepare to manage airway and assist ventilations
3. Administer 5 mg IM. Contact Medical Control Physician for further orders.

4. Monitor vital signs every 5 minutes after receiving Haldol.
5. Notify medical control that Haldol has been given.

PEDIATRIC CONSIDERATIONS:
1. Contact Medical Control Physician for orders in children < 12 years old.

SPECIAL NOTES:
1. Use caution when giving Haldol to elderly patients.

MONITOR, REPORT, DOCUMENT:
Vital signs, response to medication

END

Back to Index ↑

Heparin Infusion

PARAMEDIC/CCTP/RN

DRUG ACTION: Anticoagulant used to help prevent clots from forming by inactivating the enzyme thrombin.

INDICATIONS:
1. Management of Acute Myocardial Infarction (AMI) presenting with STEMI
2. Anticoagulant therapy
3. Thrombosis

CONTRAINDICATIONS:
4. Active bleeding, uncontrollable; except when due to disseminated intravascular coagulation.
5. Severe hypertension or renal disease.
6. Bleeding disorders/ known GI bleeding (alcoholism).
7. Known Heparin induced thrombocytopenia .

ADVERSE REACTIONS AND SIDE EFFECTS:
1. Allergic reaction/Anaphylaxis.
2. Hemorrhage.
3. Osteoporosis (only with long term, high-dose administration).
4. Thrombocytopenia

ADMINISTRATION *if trained and authorized*:
1. Contact medical control prior to administration
2. STEMI: Initial loading dose is 60 units/kg (max 4000 units)
3. STEMI: Continue with infusion at 12 units/kg/hr., round to nearest 50 units (maximum of 1000 units/hr. for patients > 70 kg. Further orders must come from medical control.

PEDIATRIC ADMINISTRATION:
1. Contact medical control prior to administration.

Heparin Bolus Guidelines:

1. The Heparin drip MUST BE maintained on an IV pump at all times during transport.
2. Check the infusion frequently to ensure it is infusing at the correct rate.
3. Observe the IV site for signs of infiltration – if this occurs, discontinue the site and apply a pressure dressing. Restart the line as soon as possible and continue with the same rate of infusion. Make note of the length of time the infusion was stopped and report to staff at the receiving facility.

For Heparin 1000 U/ml in 10 ml vials:

Patient Weight	Bolus @ 60 U/kg to max 4000 U
45 kg / 99 lbs.	2700 U or 2.7 ml
50 kg / 110 lbs.	3000 U or 3.0 ml
55 kg / 121 lbs.	3300 U or 3.3 ml
60 kg / 132 lbs.	3600 U or 3.6 ml
65 kg / 143 lbs.	3900 U or 3.9 ml
70 kg / 154 lbs.	4000 U or 4.0 ml
80 kg / 176 lbs.	4000 U or 4.0 ml
90 kg / 198 lbs.	4000 U or 4.0 ml
100 kg / 220 lbs.	4000 U or 4.0 ml (Max dose)

End

Back to Index ↑

Hydromorphone (Dilaudid)

PARAMEDIC/CCTP/RN

DRUG ACTION: Long acting narcotic analgesic and central nervous system depressant.

INDICATIONS FOR USE:

1. Moderate to severe pain

CONTRAINDICATIONS:

1. Known allergy to hydromorphone

PRECAUTIONS:

1. Use caution with suspected head injury.
2. Use caution with respiratory depression.
3. May precipitate seizures in patients with convulsive disorders.

SIDE EFFECTS:

1. Headache
2. Hypotension
3. Bradycardia
4. Respiratory depression
5. Nausea/vomiting

SPECIAL NOTES:

1. Pregnancy category C

ADMIINISTRATION: *if trained and authorized*

1.Adult: 0.5-2 mg slow IV push or IM administration.

2.Pediatric: 0.015 mg/kg slow IV push or IM administration. Contact medical control prior to administration for patients less than 12 years of age.

3.Patient-Controlled Analgesia (PCA) Pump: Follow physician ordered dosing during transport.

SPECIAL CONSIDERATIONS:
1. Hydromorphone may be reversed with naloxone in cases of suspected overdose.
2. Long-term use of narcotics may lead to physical or psychological dependence.
3. Patient-Controlled Analgesia (PCA) pump administration may be used during inter-facility transfers only.

MONITOR, REPORT, DOCUMENT
1. Monitor vital signs during transport.
2. Hydromorphone is a controlled substance and its use must be documented according to the "Controlled Substance" policy.

END

Back to Index ↑

Ipratropium Bromide (Atrovent)

EMT, AEMT, INTERMEDIATE, PARAMEDIC/CCTP/RN

DRUG ACTION: Anticholinergic bronchodilator

INDICATIONS:
1. For relief of acute bronchospasm (reversible airway obstruction) in COPD patients only

CONTRAINDICATIONS:
2. Allergy or known hypersensitivity to Atrovent
2. Hypersensitivity to atropine (chemically related)

PRECAUTIONS:
1. Use with caution in patients with heart disease, hypertension, glaucoma and the elderly.
2. Ipratropium may worsen the condition of glaucoma if it gets into the eyes. Having the patient close their eyes during nebulization may prevent this.

ADVERSE REACTIONS/SIDE EFFECTS:
2. More common: cough, dry mouth or unpleasant taste

3. Less common or rare: vision changes, eye burning or pain, dizziness, headache, nausea, nervousness, palpitations, sweating, trembling, increased wheezing or dyspnea, chest tightness, rash, hives or facial swelling.

ADMINISTRATION: *if trained and authorized*

6. Atrovent is used only in combination with albuterol in the prehospital setting.
7. Dosage for adults: Pour one unit dose bottle (500 mcg = 2.5 ml of 0.02% solution) into nebulizer reservoir with one unit dose of albuterol.
4. Connect nebulizer to oxygen source at 6 liters per minute.
5. Have patient breathe as calmly and deeply as possible until no more mist is found in the nebulizer chamber. If a mask is used, adjust the mask to prevent mist from getting into the patient's eyes.
6. One nebulizer treatment with ipratropium may be given to COPD patients prior to contact with medical control. If further nebulization is indicated, albuterol-only nebs should be given.
7. In the intubated patient, Atrovent should be administered with an adapter that permits in-line nebulization.

PEDIATRIC CONSIDERATIONS:

1. One Atrovent/albuterol neb treatment at adult strength may be given to children suffering from asthma prior to contact with medical control. If further nebulization is indicated, albuterol-only nebs should be given.

SPECIAL NOTES:

2. Nebulizer treatments for patients with active tuberculosis should be performed in well-ventilated areas (outside patient compartment if possible). Providers should use approved respiratory protection.

MONITOR, REPORT, DOCUMENT:

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

END

Back to Index ↑

Ketamine (Ketalar)

PARAMEDIC/CCTP/RN

DRUG ACTION: Dissociative anesthetic

INDICATIONS:

- Induction of anesthesia for RSI procedures.
- Control of the aggressive excited delirium patient.
- Pain control as an adjunct to narcotic medications
- For sedation of the intubated patient with systolic BP <100

CONTRAINDICATIONS:

- Patients in whom significant blood pressure elevation would be a serious hazard.
- Known hypersensitivity to the drug.
- Head trauma/Head bleed, hypertension, angina, of CVA/TIA.
- Any underlying psychiatric disorder.

PRECAUTIONS:

- Emergence reactions occur in approximately 12% of patients. Emergence reactions occur less frequently when given IM.

- Use with caution in patients with known cardiac disease.
- Monitor vital signs frequently in patients with hypertension.

ADVERSE REACTIONS/SIDE EFFECTS:

- Cardiovascular: Hypertension or hypotension, tachycardia or bradycardia, arrhythmias
- Neurological: Increased intracranial pressure, Emergence reaction (vivid imagery, hallucinations, delirium, confusion, excitement, irrational behavior)
- GI: Anorexia, nausea, vomiting, hypersalivation.
- Respiratory: Respiratory stimulation, respiratory depression, apnea (after rapid injection), laryngospasm, other airway obstruction.

ADMINISTRATION CONSIDERATIONS:

- To blunt or terminate emergence reactions, a dose of benzodiazepine may be required
- Rapid IV administration may cause respiratory depression

DOSING:

- **ADULT**
  - Sedation for RSI: 3mg/kg slow IV push over 15-30 seconds (standing order)
  - For Pain Control as an adjunct to narcotic medication, administer 0.25mg/kg IV/IO/IM as a single dose any time after narcotics have been given for severe pain.
    - Approved simplified dosing: Small (15mg), Medium(20 mg), Large (25 mg)
  - Control of Aggressive Excited Delirium: 5mg/kg IM. (standing order) Depending on total volume to be administered, consider splitting dose into numerous consecutive injections
  - For sedation of the intubated patient with systolic BP <100, administer 0.5 mg/kg IV/IO/IM, may repeat every 10 minutes
    - Approved simplified dosing, Small (30mg), Medium (40mg), Large (50mg)

- **PEDIATRIC**
  - Contact medical control for patients <12 years of age.

SPECIAL NOTES:

- Agitated or aggressive patients requiring this level of sedation should elicit a response by law enforcement.
- Ketamine is a controlled substance and its use must be documented according to the Controlled Substance policy.

END

Back to Index ↑

Ketorolac Tromethamine (Toradol)

PARAMEDIC/CCTP/RN

DRUG ACTION: Nonsteroidal anti-inflammatory drug (NSAID) that is indicated for the management of moderately severe, acute pain that requires analgesia. The action of this drug is unknown, but it is thought to inhibit prostaglandin synthesis.

INDICATIONS:

1. Musculoskeletal pain
2. Kidney stones

CONTRAINDICATIONS:

1. Allergy or known hypersensitivity to Toradol or past allergic manifestations to aspirin or other NSAIDs
2. Active peptic ulcer disease, recent GI bleeding or perforation
3. Suspected or confirmed cerebrovascular bleeding
4. Hemophilia or other bleeding problems
5. Hypotension (systolic BP < 90 systolic in adults)
6. Do not use in the second and third trimesters of pregnancy.

PRECAUTIONS:
1. Use with caution in hepatic or renal disease, CHF and asthma.
2. Use caution if the patient may need to go to surgery, Ketorolac inhibits platelet aggregation and can prolong bleeding time for up to 48 hours.
3. Carefully observe patients with defects in the blood clotting mechanism and those taking anticoagulants.
4. Use caution if patient is taking ASA or other NSAIDs on a regular basis.
5. Ketorolac lacks the sedative and anti-anxiety activity of Fentanyl, MS, or Versed.
6. In patients with known renal insufficiency, administer ½ of the recommended dose.

ADVERSE REACTIONS/SIDE EFFECTS:
1. Nausea and/or vomiting, gastrointestinal pain, diarrhea
2. Pain at the injection site
3. Edema (face, fingers, lower legs, ankles and/or feet)

ADMINISTRATION: *if trained and authorized*
1. <65 years of age, administer 30 mg SLOW (> 15 sec.) IV/IO or if unable to start an IV, 60 mg DEEP, SLOW IM. If IM administration, apply pressure at site for 15-30 sec. to decrease local effects. Initial onset with IV use is 1-5 minutes with peak action in 1-2 hours and duration of 4-6 hours. Initial onset with IM use is 30-60 minutes with peak action 1-2 hours and duration of 4-6 hours. >65 years of age, renally impaired, or adults weighing <110 lbs., administer 15 mg IV/IO or 30 mg DEEP SLOW IM.
2. In patients with known renal insufficiency (i.e. kidney failure), administer 15 mg SLOW (> 15 sec) IV/IO, or 30 mg DEEP, SLOW IM.

PEDIATRIC CONSIDERATIONS:
1. Do not give to patients < 12 years without MD order.
2. Initial dose is 15 mg IV or IM.

MONITOR, REPORT, DOCUMENT:
Vital signs within 5 minutes after administration
END

Back to Index ↑

Lidocaine

AEMT, INTERMEDIATE, PARAMEDIC/CCTP/RN

DRUG ACTION:
1. Anesthetic agent

INDICATIONS:
1. Pain reduction and anesthesia for the conscious patient who has had an EZ – IO placed

CONTRAINDICATIONS:
1. Hypersensitivity
2. SA, AV, or intraventricular blocks

ADVERSE REACTIONS/SIDE EFFECTS:
1. CNS effects including seizure
2. CV effects including bradycardia

ADMINISTRATION: *if trained and authorized*
1. Slowly administer 20-40 mg of 2% preservative free Lidocaine into the IO site

PEDIATRIC CONSIDERATIONS:
1. Slow administration of 0.5 mg/kg of 1% or 2% preservative free Lidocaine into the I/O site

Special Considerations:
1. Insertion of the IO in conscious patients has been noted to cause moderate to severe discomfort from fluids flowing into the medullary space. It is recommended to slowly infuse Lidocaine into the site allowing a few minutes for the Lidocaine to work before pushing the bolus of saline to clear the site.

MONITOR, REPORT, DOCUMENT:
Monitor EKG and Vitals, Report to ED Staff, and document usage, dosage and changes in patient conditions.

END

Back to Index ↑

Lorazepam (Ativan)

INTERMEDIATE, PARAMEDIC/CCTP/RN

DRUG ACTION: Enhances inhibitory neurotransmitter GABA at CNS; produces anxiolytic, muscle relaxant, anticonvulsant, sedative, and antiemetic effect.

INDICATIONS:
1. Seizure control
2. Anxiety (Paramedic, CCTP, and RN only)
3. Synergistic affect with other analgesics.

CONTRAINDICATIONS:

1. Pre-existing CNS depression
2. Narrow-angle glaucoma
3. Severe uncontrolled pain
4. Severe hypotension

PRECAUTIONS:
1. Renal or hepatic impairment
2. Compromised pulmonary function
3. Concomitant CNS depressant use

ADVERSE REACTIONS/SIDE EFFECTS:
1. Drowsiness/Confusion
2. Blurred vision /Headache
3. Slurred speech
4. Hypotension

ADMINISTRATION: *if trained and authorized*
1. For anxiety: Administer 1-2 mg IV/IO/IM. Contact Medical Control for additional doses.
2. For seizure control: Administer 4 mg IV/IO/IM. May repeat 4 mg if no effect seen 10-15 minutes after initial administration.
3. For synergistic affect with other analgesics 0.5 to 1mg.

PEDIATRIC CONSIDERATIONS:
1. For anxiety: Administer 0.05 mg/kg IV/IO/IM to a maximum dose of 2 mg.
2. For seizure control: Administer 0.05-0.1 mg/kg IV/IO/IM to a maximum dose of 4 mg.

SPECIAL NOTES:
1. Can be reversed with flumazenil
2. Can be given rectally if IV access is not available
3. Short shelf life if not refrigerated
4. Pregnancy category D
5. Ativan is a controlled substance and its use must be documented according to the "Controlled Substance" policy.

MONITOR, REPORT, DOCUMENT:
Monitor EKG and Vitals, Report to ED Staff, and document usage, dosage and changes in patient conditions.

END

Back to Index ↑

Magnesium Sulfate

PARAMEDIC/CCTP/RN

DRUG ACTION: Electrolyte; central nervous system depressant; anticonvulsant; antiarrhythmic

INDICATIONS:
1. Torsades de pointes
2. Severe asthma
3. Obstetrical: to resolve seizures associated with eclampsia; contractions in premature labor
4. Digitalis toxicity
5. Tricyclic overdose

CONTRAINDICATIONS:

1. Heart block
2. Shock
3. Hypocalcaemia
4. Renal disease
5. Hypomagnesemia

PRECAUTIONS:
1. Be prepared to give calcium chloride if respiratory depression occurs.
2. Use with caution in renal failure.

ADVERSE REACTIONS/SIDE EFFECTS:
1. Dizziness or drowsiness; altered level of consciousness
2. Respiratory depression
3. Hypotension (from rapid administration)
4. Arrhythmias

ADMINISTRATION: *if trained and authorized*
1. For severe asthma, or Torsades de pointes: Administer 2 gm (4 cc of a 50% solution) diluted in 10 cc of NS and administer by slow IV/IO.
2. For eclampsia, ALS may give 4-6 grams of magnesium sulfate diluted in 100cc NS over 20 minutes before contacting Medical Control Physician; other obstetrical indications, digitalis toxicity or tricyclic overdose: consult with Medical Control Physician.
3. If respiratory depression develops after administration, consult with medical control physician regarding calcium chloride administration.

PEDIATRIC CONSIDERATIONS:
1. Do not give to patients < 12 years without Medical Control Physician order.
2. Initial dose is 25-50 mg/kg IV or IO.

MONITOR, REPORT, DOCUMENT:
Vitals signs, respiratory, cardiovascular and neurologic status within 5 minutes of administration and every 15 minutes thereafter.

END

Back to Index ↑

Methylprednisolone (Solu-Medrol)

PARAMEDIC/CCTP/RN

DRUG ACTION: Adrenal corticosteroid

INDICATIONS FOR USE:
1. Decrease inflammation
2. Suppress immune reactions (e.g. anaphylaxis)

CONTRAINDICATIONS:
1. Allergy to this medication
2. Children Less than 2 years of age
3. Tuberculosis or AIDS

4. Use with caution in patients with a history of peptic ulcer, congestive heart failure, liver or kidney disease, diabetes mellitus

SIDE EFFECTS:
1. Insomnia Heartburn Mood swings
2. Delayed wound healing
3. Increased susceptibility to infection
4. Hypertension

SPECIAL NOTES:
1. Provided in a Mix-O-Vial. Follow manufacturer's recommendations to reconstitute
2. Pregnancy category C

ADMINISTRATION: *if trained and authorized*
1. ADULT: 125 mg
2. PEDIATRIC: 2 mg/kg maximum dose 125 mg

MONITOR, REPORT, DOCUMENT:
1. Continuous ECG
2. Vital signs before and within 5 minutes after administration

END

Back to Index ↑

Back to Index ↑

Metoprolol (Lopressor)

PARAMEDIC/CCTP/RN

DRUG ACTION: Beta-adrenergic blocker (predominately cardioselective – Beta 1)

INDICATIONS FOR USE:
1. Acute Coronary Syndrome (ST Elevation MI – STEMI)
2. Rare pre-hospital use (only with specific on-line medical control): Narrow complex SVT, A Fib with RVR, Hypertension

CONTRAINDICATIONS:
1. Bradycardia (HR less than 50) AV Blocks (except 1st degree)
2. Hypotension (BPs less than 100 mmHg) Acute CHF
3. COPD Asthma
4. Concurrent allergic reaction from any cause
5. Raynaud's disease
6. Cocaine use
7. Known allergy

SIDE EFFECTS:
1. Bradycardia, hypotension, precipitation or exacerbation of CHF, peripheral vasospasm,
2. Bronchial Spasm

SPECIAL NOTES:
1. Use caution in patients with inferior wall MI (prone to bradycardia and hypotension)
2. It is not unusual to increase time between doses if concern for bradycardia or hypotension
3. Not an ideal beta-blocker for treatment of hypertension

ADMINISTRATION: *if trained and authorized*
1. Preparation: 1mg/ml in 5 ml syringe
2. Adults: 5mg slow IV push – Dose may be repeated every 5 minutes to max of 15mg total infused (it is very uncommon for more than 2 doses to be administered in the prehospital setting)

MONITOR, REPORT, DOCUMENT:
1. Continuous ECG monitoring
2. Vital signs every 5 minutes after administration and between doses. Be sure to include as part of verbal and written report

END

Back to Index ↑

Midazolam (Versed)

PARAMEDIC/CCTP/RN

DRUG ACTION: Benzodiazepine with amnesic effects; Central nervous system depressant

INDICATIONS:
- Sedation for patients prior to intubation, cardioversion, and transcutaneous pacing
- Sedation maintenance for intubated patients
- Seizure management
- Synergistic affect with analgesics
- Anxiety and agitation
- Pre-intubation sedation agent (consult medical control for use & dosing)

CONTRAINDICATIONS:
- Hypersensitivity
- Hypotension

SIDE EFFECTS:
- Hypotension
- Respiratory depression
- Bradycardia

ADMINISTRATION CONSIDERATIONS:
- Note: Pregnancy Category D
- Due to amnesic effects, midazolam is not the benzodiazepine of choice for simple anxiety. Consider other benzodiazepines first.
- Always have advanced airway equipment available.
- Consider pre-oxygenate prior to use.
- Can reverse with Romazicon
- The maximum fluid volume for Intra-nasal delivery is 1cc per nostril.

DOSING:
- **ADULT**
  - Sedation prior to Cardioversion, and Transcutaneous Pacing: 2mg IV, IO, or IN (standing order)
  - Sedation Maintenance for Intubated patients: 0.5-2mg per dose (IV or IO), titrated to sedative effects with a maximum total dose of 0.1mg/kg (standing order)
  - Seizures: Up to 0.1mg/kg IV, IO, or IN (standing order)
  - Synergistic Effects with Analgesics: 1-2mg IV or IO (standing order)
  - Anxiety or Agitation: 2mg IV, IO, or IN (standing order)
- **⍟ PEDIATRIC**
  - Sedation Maintenance for Intubated Patients: 0.1mg/kg IV, IO, or IN up to a maximum dose of 2mg (standing order)
  - Seizures: 0.1mg/kg IV, IO, IM or IN up to a maximum dose of 2mg (standing order)
  - Anxiety or Agitation: 0.05mg/kg IV, IO, or IM; alternatively: 0.1mg/kg intranasally. (standing order)

SPECIAL NOTES:

- Midazolam is a controlled substance and its use must be documented according to the Controlled Substance policy.

END

Back to Index ↑

Morphine Sulfate

INTERMEDIATE, PARAMEDIC/CCTP/RN

DRUG ACTION: Narcotic analgesic; increases venous capacity and decreases systemic vascular resistance.

INDICATIONS:

1. Chest pain of suspected cardiac origin.
2. Musculoskeletal pain.
3. Kidney stones.
4. Pulmonary edema.
5. Burns.

CONTRAINDICATIONS:

1. Allergy or known hypersensitivity to morphine sulfate.
2. Hypotension (systolic BP < 90 systolic in adults).

PRECAUTIONS:

1. Use with caution in asthma and COPD.
2. Be prepared to assist ventilations and to administer the narcotic antagonist Naloxone (Narcan).

ADVERSE REACTIONS/SIDE EFFECTS:

1. Respiratory depression, hypotension, sedation, and confusion.
2. Bradycardia, dry eyes, blurred vision, and vomiting.

ADMINISTRATION: *if trained and authorized*

1. Administer 4-6 mg IV/IO or 1mg/kg IM slowly (titrated to patient response) over several minutes. 2-4 mg. may be administered if pain management has not been achieved with initial dose. Vital signs must be checked after each dose.
1. If respiratory depression or hypotension occurs after using, ventilate the patient and administer 2 mg of naloxone (Narcan) IV/IO push. This can be done prior to medical control contact. If no improvement after one minute, contact physician and obtain order to administer a second dose of naloxone (Narcan) 2 mg. This dose may be repeated every 2 - 3 minutes until a total of 10 mg of naloxone (Narcan) is administered. On long transports, repeat doses may be required periodically if respiratory depression occurs.

SPECIAL NOTES:

1. Addictive, federal regulations apply.
2. Can be reversed with naloxone (see drug profile 014)
3. Pregnancy category C (D in long-term use or high dose)

PEDIATRIC CONSIDERATIONS:

1. Patients < 12 years may be given an initial dose of 0.1 mg/kg IV/IM on standing order. Contact Medical Control Physician for medication order of a secondary dose if patient pain is not managed.

MONITOR, REPORT, DOCUMENT:

1. Effect on pain level. Effect on respiratory rate and effort.
2. Vital signs within 5 minutes after administration.
3. Morphine Sulfate is a controlled substance and its use must be documented according to the "Controlled Substance" policy.

END

Back to Index ↑
Back to Index ↑

Naloxone (Narcan)

AEMT, INTERMEDIATE, PARAMEDIC/CCTP/RN

DRUG ACTION: Narcotic antagonist

INDICATIONS:

1. Respiratory depression (< 12/min.) from narcotic overdoses such as: morphine, Fentanyl, meperidine (Demerol), heroin, codeine, oxycodone (Percodan), oxymorphone (Numorphan), Hydromorphone (Dilaudid), diphenoxylate (Lomotil), propoxyphene (Darvon), and pentazocine (Talwin)
2. As a diagnostic tool in coma of unknown origin

CONTRAINDICATIONS:

1. Allergy or known hypersensitivity to Naloxone

PRECAUTIONS:

1. Very short half-life; monitor patient closely and prepare to re-dose if deterioration occurs.
2. Naloxone should be titrated to the patient's respiratory status, not the level of consciousness. In the patient with a protected airway (i.e. gag reflex), adequate respirations, and GCS of 10 - 14, use discretion regarding the administration of Narcan.
3. Consider applying Patient restraints prior to the administration of Narcan.
4. IN Naloxone is less likely to be effective in someone who is inhaling vasoconstrictors.

ADVERSE REACTIONS/SIDE EFFECTS:

1. In the chronic narcotic abuser, may precipitate withdrawal symptoms, including seizures, violent behavior, miscarriage or premature labor.
2. Hypotension or hypertension

ADMINISTRATION:

ADULT DOSING -				
Indication	**Intravenous (IV)**	**Intraosseous (IO)**	**Intramuscular (IM)**	**Intranasal (IN)**
Respiratory depression	2.0 mg	2.0 mg	2.0 mg	2.0 mg (1 mg in each nostril)

PEDIATRIC DOSING -				
Indication	**Intravenous (IV)**	**Intraosseous (IO)**	**Intramuscular (IM)**	**Intranasal (IN)**
Respiratory depression from narcotic overdose	≤ 20 kg or 5 years: = 0.1 mg/kg > 20 kg or 5 years: l = 2.0 mg	≤ 20 kg or 5 years: = 0.1 mg/kg > 20 kg or 5 years: l = 2.0 mg	≤ 20 kg or 5 years: = 0.1 mg/kg > 20 kg or 5 years: l = 2.0 mg	≤ 20 kg or 5 years: = 0.1 mg/kg > 20 kg or 5 years: l 2.0 mg

SPECIAL NOTES:

1. Further orders must come from monitoring physician. Follow-up dosing will generally be 2.0 mg every 2-3 minutes up to a total 10 Mg.

2. If no response after 10 mg, it is unlikely to be effective.
3. Remarkably safe and effective.
4. The maximum fluid volume for IN delivery is 1 cc per nostril.

MONITOR, REPORT, DOCUMENT: Usage, dosage, patient response to medication.

END

Back to Index ↑
Back to Index ↑

Nitroglycerin Drip

PARAMEDIC/CCTP/RN

DRUG ACTION: Vasodilator (relaxation of vascular smooth muscle with dilation of peripheral arteries and veins), Decreased venous return.

INDICATIONS FOR USE:
1. Chest pain of cardiac origin (ischemic), angina unrelieved with three sublingual nitroglycerin.
2. Acute Congestive Heart Failure/Pulmonary Edema requiring careful blood pressure control
3. Angina with systolic blood pressures less than120 but greater than 100 who may not tolerate sublingual administration
4. Angina with right ventricular myocardial infarction who may not tolerate larger doses of nitrates

CONTRAINDICATIONS:
1. Hypotension (systolic pressure <100 mmHg)
2. Use of sildenafil (Viagra) within the past 24 hours
3. Use of tadalafil (Cialis), vardenafil (Levitra) within the past 48 hours

SIDE EFFECTS:
1. Headache
2. Hypotension (systolic pressure less than100 mmHg) Tachycardia
3. Use with caution in patients with inferior AMI

SPECIAL NOTES:
1. Medication is stored in a glass bottle, Drug is sensitive to light and moisture.
2. Medication must be administered with approved nitroglycerin IV tubing.
3. No other medications may be administered through the nitroglycerin tubing.
4. Medication must be administered with infusion pump to ensure precise flow rates.
5. Pregnancy Category C

ADMINISTRATION: *if trained and authorized*
Adults: Infusion 50 mg in 250 ml (200 micrograms per ml)

Angina: Start infusion rate of 3-6 ml/hour (10-20 micrograms/min) and increase this infusion rate by 3-6 ml/hour (10-20 micrograms/min) every 3-5 minutes up to a rate of 12 ml/hour is reached (40 micrograms)

A. If systolic blood pressure drops quickly, is below 90 mmHg, or patient becomes hemodynamically unstable, decrease drip rate or stop administration accordingly.
B. If chest pain/discomfort is relieved and blood pressure is stable, maintain current drip rate. If higher doses are needed, contact medical control
C. Hypertensive emergencies with CHF/pulmonary edema: Blood pressure greater than 180/100, start infusion at 12 ml/hour (40 micrograms/min) and contact medical control

NITROGLYCERIN DRIP 50 mg in 250 ml														
Dose mcg/min	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80

Flow rate ml/hr.	3	4.5	6	7.5	9	10.5	12	13.5	15	16.5	18	19.5	21	22.5	24

MONITOR, REPORT, DOCUMENT:
1. Continuous ECG monitoring
2. Vital Signs and pain assessment every 3-5 minutes during administration
3. Blood pressure before and after increases in medication dose

END

Back to Index ↑

Nitroglycerin (NTG) Tablet, spray or Nitro-Bid Paste

EMT, AEMT, INTERMEDIATE, PARAMEDIC/CCTP/RN

DRUG ACTION: Antianginal, coronary and peripheral vasodilator

INDICATIONS:
1. Chest pain of suspected cardiac origin
2. Pulmonary edema
3. Hypertension (only on physician order)

CONTRAINDICATIONS:
1. Allergy or known hypersensitivity to nitroglycerin
2. Head trauma
3. Hypovolemia, hypotension (BP < 90 systolic in adults), and shock
4. Recent sildenafil [Viagra, Levitra (24 hrs.) or Cialis (48 hrs.)] ingestion

ADVERSE REACTIONS/SIDE EFFECTS:
1. Headache, dizziness, and weakness
2. Tachycardia, fainting, and hypotension

ADMINISTRATION: *if trained and authorized*
1. Establish IV NS TKO.
2. Inquire about Viagra, Levitra or Cialis use.
3. **Basic Life Support (EMT)**: (May be administered only to patients for whom it is prescribed).
   i. Assist patient in taking NTG as prescribed by personal physician.
3. **Basic Life Support with IV training (AEMT)**:
   i. If IV is established and systolic BP is at least 110, administer up to 2 NTG SL 3 – 5 minutes apart. Further NTG orders must come from Medical. If systolic BP drops < 90 after any NTG, discontinue NTG and administer a 250 cc fluid bolus.
4. **Advanced Life Support**:
   i. For myocardial ischemia or pulmonary edema:
   Give 0.4 mg (gr 1/150) NTG tablet or one metered dose NTG spray sublingually. Repeat vitals.
   A. Repeat tablet or spray sublingually every 5 minutes as long as pain or pulmonary edema persists and patient is not hypotensive, regardless if patient has taken own prescription.
   B. OR use of Nitro-Bid Paste: Each tube of ointment is supplied with a pad of ruled, impermeable, paper applicator. Measure Dosage: Place 1inch (15 mg) to 2 inches (30 mg) and place the applicator (ointment side down) on the chest or shoulder of patient. Do not rub into the skin. Tape the applicator into place. NOTE: Nitro-Bid® can satin clothing.
   8. CHF/Pulmonary Edema
   A. BP ≥ 140/p give 0.8 NTG SL q. 3-5 min to patient response, if BP 110/p-139/p, administer 0.4 mg of NTG SL every 3 - 5 minutes titrated to patient response.

PEDIATRIC CONSIDERATIONS:
1. Do not give to patients < 12 years without physician order.

SPECIAL NOTES:

i. Consider giving morphine sulfate if pain is unrelieved by NTG.
2. NTG is effective in relieving angina pectoris. Conditions such as esophageal spasm can respond also.

MONITOR, REPORT, DOCUMENT:

1. EKG, Vital signs every 5 minutes after administration and between doses. Be sure to include as part of verbal and written report. Document relief with pain level 1-10.

END

Back to Index ↑

Nitrous Oxide/Oxygen Mixture (Nitronox)

INTERMEDIATE, PARAMEDIC/CCTP/RN

DRUG ACTION: Analgesic; produces rapid but reversible pain relief

INDICATIONS:

1. Chest pain
2. Musculoskeletal injuries
3. Burns without inhalation injury

CONTRAINDICATIONS:

1. Allergy or known hypersensitivity to nitrous oxide
2. Head injuries
3. Decreased level of consciousness
4. COPD
5. Severe maxillofacial injuries
6. Suspected pneumothorax or thoracic trauma
7. Ear infections
8. Distended abdomen, suspected bowel obstruction, or abdominal trauma

PRECAUTIONS:

1. NitroNox® is a patient-controlled treatment. Medical personnel must not hold it on the patient's face.
2. Is not flammable but will support combustion in the same manner as oxygen.

ADVERSE REACTIONS/SIDE EFFECTS:

1. Lightheadedness or drowsiness
2. Blood pressure and pulse tend to remain constant.
3. No effect on pupils

ADMINISTRATION: *if trained and authorized*

1. Assure that ambulance is well ventilated. Power vent must be on.
2. Administer through demand valve mask or mouthpiece held by patient. Administration is triggered by negative pressure generated by patient inhalation.
3. Document start and finish times, and record vital signs during and after treatment.
4. Notify medical control that NitroNox® is being used.

SPECIAL NOTES:

4. Provides analgesia with minimal anesthesia; 50:50 mixture of nitrous oxide and oxygen.
5. Is equivalent to 15-20 mg of morphine sulfate.

MONITOR, REPORT, DOCUMENT:

1. Vital signs, response to medication.

2. NitroNox® is a controlled substance and its use must be documented according to the "Controlled Substance" policy.

END

Back to Index ↑

Ondansetron Hydrochloride (Zofran)

PARAMEDIC/CCTP/RN

DRUG ACTION: Antinausea, antiemetic. Blocks serotonin, both peripherally on vagal nerve terminals and centrally in chemoreceptor trigger zone.

INDICATIONS:
1. Patients experiencing nausea or vomiting.

PRECAUTIONS:
i. Zofran can cause QT elongation & arrhythmias.
ii. Torsades.

CONTRAINDICATIONS:
1. There are no absolute contraindications to the use of Zofran.

ADVERSE EVENTS:
1. Overdose may produce a combination of CNS stimulation or depressant effects.

SIDE EFFECTS:
1. Frequent: Anxiety, dizziness, drowsiness, headache, fatigue, constipation, diarrhea, hypoxia, and urinary retention.
2. Occasional: abdominal pain, fever, feeling of cold, paresthesia, weakness
3. Rarely: hypersensitivity reaction, blurred vision

ADMINISTRATION: *if trained and authorized*
1. IV administration 2-4 mg IV/IO push over 2-5 minutes. ***– or-***
2. Sublingual administration of one 4mg. tablet if IV is not yet established.
3. Monitor patient for vomiting and potential airway compromise.

PEDIATRIC CONSIDERATIONS:
1. Do not give to patients < 12 years without physician order.
2. Pediatric IV administration dose is 0.15 mg/kg in patients > 2 year old.

MONITOR, REPORT, DOCUMENT:
Vital signs, response to medication.

END

Back to Index ↑

Oxygen

EMR, EMT, AEMT, INTERMEDIATE, PARAMEDIC/CCTP/RN

DRUG ACTION: Increases arterial oxygen tension (SaO_2) and hemoglobin saturation

INDICATIONS: LOW CONCENTRATION (24 - 44%):
1. History of chronic obstructive pulmonary disease (emphysema, chronic bronchitis, asthma in adult, heavy smoker [40 pack years or more])
2. Patients with SaO_2 readings ≥ 95%

INDICATIONS: HIGH CONCENTRATION (60 - ≈ 100%):
1. Smoke, carbon monoxide, or toxic gas inhalation
2. Trauma or suspected blood loss
3. Hypoxia (SaO_2 < 95%) from any cause
4. Respiratory distress, poor capillary refill or other indications of poor oxygenation
5. Unresponsive patient
6. Obstetric patients with known or suspected complications

CONTRAINDICATIONS:
1. None in the prehospital setting

PRECAUTIONS:
1. This guideline refers to spontaneously breathing and adequately ventilating patients only.
2. High concentration O_2 in some cases (emphysema and asthma) may depress respiratory drive; be prepared to assist ventilation, but don't allow patients to become severely hypoxic for fear of respiratory arrest.
3. Agitation or restlessness can be a sign of hypoxia.
4. Do not use in the presence of open flames.
5. Treatment for anxiety hyperventilation should be treated with reassurance and coaching to slow breathing. If the possibility of another underlying cause exists (i.e. pulmonary embolus, asthma, MI) then the patient should be treated with oxygen. DO NOT treat any patient by having them breathe into a paper bag or O_2 mask that is not supplied with O_2.

ADVERSE REACTIONS/SIDE EFFECTS:
1. Non-humidified oxygen can dry mucous membranes, but humidified O_2 is not indicated in the prehospital setting.

ADMINISTRATION: *if trained and authorized*
1. Deliver low concentrations via nasal cannula @ 1 - 6 lpm.
2. Deliver high concentrations via non-rebreather mask @ 6 - 15 lpm.
3. Attempt to obtain and document pulse oximetry readings before and during oxygen therapy.

PEDIATRIC CONSIDERATIONS:
1. Use pediatric mask or blow-by if mask is not tolerated.

SPECIAL NOTES:

1. If oximetry is unavailable, patients should receive high concentration oxygen unless low concentration is indicated.

END

Back to Index ↑
Back to Index ↑

Rocuronium Bromide (Zemuron)

PARAMEDIC/CCTP/RN

DRUG ACTION: Non-depolarizing neuromuscular blocking agent; onset: 1 min.; duration: 30-40 min; paralysis onset decreases and duration of maximal effect increases with increasing doses

INDICATIONS:

- When further muscle paralysis is necessary following RSI
- Head injuries with agitation or uncontrolled motor activity that may threaten the airway or spine, or increase intracranial pressure
- As an initial paralytic when succinylcholine is contraindicated

CONTRAINDICATIONS:

- Hypersensitivity

PRECAUTIONS:

- The safety of this drug in pregnancy has not been established.
- Quinidine, magnesium and certain antibiotics may intensify paralysis

ADVERSE REACTIONS/SIDE EFFECTS:

- Prolonged apnea/respiratory paralysis
- Inability to perform adequate neurological exam
- Prolonged QT interval

ADMINISTRATION CONSIDERATIONS:

- Must be diluted with diluent provided
- Must maintain airway & assist ventilations. Because this is a longer acting paralytic (compared to succinylcholine), be prepared for long-term airway management if intubation fails.

DOSING:

- **ADULT**
  - Post-Intubation Paralysis: 1mg/kg IV or IO over 15-30 seconds (standing order)
  - Pre-Intubation Paralysis/Initial Paralytic: 1mg/kg IV or IO rapid bolus (standing order)
- ⍟ **PEDIATRIC**
  - Initial Post-Intubation Paralysis: 1mg/kg IV or IO over 15-30 seconds (standing order)
  - Pre-Intubation Paralysis/Initial paralytic: 1mg/kg IV or IO rapid bolus (standing order)

END

Back to Index ↑

Sodium Bicarbonate

PARAMEDIC/CCTP/RN

DRUG ACTION: Neutralizes acids

INDICATIONS FOR USE:
1. Treat metabolic acidosis associated with cardiopulmonary arrest
2. Ventricular dysrhythmias secondary to cyclic antidepressants

CONTRAINDICATIONS:
1. Alkalosis

SIDE EFFECTS:
1. Alkalosis

SPECIAL NOTES:
1. Must be diluted for neonates
2. Pregnancy category C

ADMINISTRATION: *if trained and authorized*
1 mEq/kg

MONITOR, REPORT, DOCUMENT:
1. Changes in level of consciousness ECG changes
2. Vital signs within 5 minutes after administration

END

Back to Index ↑

Succinylcholine (Anectine)

PARAMEDIC/CCTP/RN

DRUG ACTION: Depolarizing neuromuscular block; onset: 30–60 seconds (peak 2 min.); duration: 3–10 min.

INDICATIONS: When rapid muscle paralysis is necessary to facilitate emergency endotracheal intubation.

CONTRAINDICATIONS:
- Hypersensitivity
- Neuromuscular disease - (i.e. ALS, chronic para/quadriplegia, multiple sclerosis, muscular dystrophy)
- Hyperkalemia
- Known Acute or chronic renal failure with K+ > 5.0 mEq/L
- Penetrating eye injury
- History of malignant hyperthermia
- Burns, multiple traumatic and soft tissue injuries > 24 hours old
- Increased intraocular pressure (relative contraindication)

ADVERSE REACTIONS/SIDE EFFECTS:
- Dysrhythmias
- Prolonged apnea, respiratory depression, or bronchospasm
- Malignant hyperthermia (rare)
- Increase in serum potassium
- Increased intracranial pressure (ICP)
- Inability to perform adequate neurological exam

ADMINISTRATION CONSIDERATIONS:
- Make sure all RSI medications are prepared prior to induction. Pre-oxygenate.
- Be prepared to intubate patient immediately and assist ventilations. An alternative method of ventilation (BVM with 100% O2) must be available.
- Be prepared to treat arrhythmias
- Utilize frequent blood pressure and continuous SaO_2 monitoring.
- Consider need for longer acting paralytic once airway is secured
- If consistent and dramatic rise in temperature is observed, utilize whatever means available to lower the patient's body temperature. Notify medical control and the receiving physician of the occurrence.
- Adults: Have an assistant utilize Selleck's maneuver (cricoid pressure) to prevent regurgitation/aspiration.
- ⍟ Pediatrics: Anticipate the potential for bradycardia

DOSING:
- **ADULT**
  - RSI: 2 mg/kg IV or IO rapid bolus (standing order)
- ⍟ **PEDIATRIC**

- RSI: 2 mg/kg IV or IO rapid bolus. If relaxation becomes inadequate, a second dose may be given. (standing order).

END

Back to Index ↑

Terbutaline Sulfate

PARAMEDIC/CCTP/RN

ACTION:

1. Is selective for beta2 adrenergic receptors, resulting in relaxation of smooth muscle in the bronchial tree and in the peripheral vasculature.
2. Inhibition of uterine smooth muscle contractility

INDICATIONS:

1. Bronchial asthma, spasm associated with exercise and/or COPD.
2. Control premature labor (Interfacility transfers only)

CONTRAINDICATIONS:

1. Hypersensitivity
2. Tachydysrhythmias
3. Digitalis-induced tachycardia

PRECAUTIONS:

1. Hypertension
2. Seizure disorders
3. Known ACS patients
4. Older than 60 years of age
5. Changes in systolic and diastolic blood pressure.
6. Not recommended in children less than 12 years of age.

ADVERSE REACTIONS AND SIDE EFFECTS:

1. Restlessness, apprehension, palpitations, dizziness.
2. Nausea, vomiting, headache.
3. Tachycardia, cardiac arrest, HTN.

ADULT ADMINISTRATION *if trained and authorized*:

1. Respiratory distress
    a. Administer 0.25 mg SQ q 15-30 min, maximum 0.5mg 12 hours.
    b. Monitor vitals
    c. Contact medical control for additional orders
2. Uncontrolled premature labor
    a. Contact medical control to administer 0.25 mg SQ

PEDIATRIC ADMINISTRATION *if trained and authorized*:

1. Contact medical control to administer 0.01 mg/kg SQ-max dose of 0.25 mg

SPECIAL CONSIDERATIONS:

1. **May only be administered by Paramedic/RN personnel.**
2. Protect ampule from light and do not use if discolored.
3. Closely monitor maternal heart rate and blood pressure if given for pre-term labor.

END

Back to Index ↑

Back to Index ↑

Vasopressin

INTERMEDIATE, PARAMEDIC/CCTP/RN

DRUG ACTION: Peripheral vasoconstriction

INDICATIONS FOR USE:
1. Cardiac arrest patients in ventricular fibrillation, pulseless ventricular tachycardia, asystole or pulseless electrical activity (as an option in place of initial or second dose of epinephrine)

CONTRAINDICATIONS:
1. Conscious patients with coronary artery disease
2. Allergy

SIDE EFFECTS:
1. Pallor
2. Bronchial constriction
3. Uterine contraction

SPECIAL NOTES:
1. Vasopressin may be given in place of the 1^{st} or 2^{nd} dose of epinephrine in the cardiac resuscitation protocol.
2. Pregnancy category C

ADMINISTRATION: *if trained and authorized*

1. Adults: 40 Units IV or IO, one dose only

MONITOR, REPORT, DOCUMENT:
1. EKG
2. Vital signs and breath sounds within 5 minutes of administration

END

Back to Index ↑

Vecuronium Bromide (Norcuron)

PARAMEDIC/CCTP/RN

DRUG ACTION: Non-depolarizing neuromuscular blocking agent; onset: 1.5 - 4 min.; duration: 30 – 60 min; paralysis onset decreases and duration of maximal effect increases with increasing doses

INDICATIONS:
- When further muscle paralysis is necessary following RSI
- Head injuries with agitation or uncontrolled motor activity that may threaten the airway or spine, or increase intracranial pressure
- As an initial paralytic when succinylcholine is contraindicated
- May be useful in status asthmaticus or status epilepticus.

CONTRAINDICATIONS:
- Hypersensitivity

PRECAUTIONS:
- The safety of this drug in pregnancy has not been established.
- Quinidine, magnesium and certain antibiotics may intensify paralysis.

ADVERSE REACTIONS/SIDE EFFECTS:
- Prolonged apnea/respiratory paralysis
- Inability to perform adequate neurological exam

ADMINISTRATION CONSIDERATIONS:
- Must be diluted with diluent provided
- Must maintain airway & assist ventilations. Because this is a longer acting paralytic (compared to succinylcholine), be prepared for long-term airway management if intubation fails.

DOSING:
- **ADULT**
  - Post-Intubation Paralysis: 0.1mg/kg IV or IO over 15-30 seconds (standing order)
  - Pre-Intubation Paralysis/Initial Paralytic: 0.1mg/kg IV or IO rapid bolus (standing order)
- ⍟ **PEDIATRIC**
  - Post-Intubation Paralysis: 0.1mg/kg IV or IO over 60 seconds (standing order)
  - Pre-Intubation Paralysis/Initial Paralytic: 0.1mg/kg IV or IO rapid bolus (standing order)

END

Back to Index ↑

Transport Medications

Alteplase (tPA) (Activase)

PARAMEDIC/CCTP/RN

DRUG ACTION: Tissue plasminogen activator (tPA) is a class of drugs responsible for promoting the breakdown of blood clots (thrombolysis).

INDICATIONS FOR USE:
1. Acute ischemic stroke with onset less than 3 hours
2. Acute myocardial infarction (MI)
3. Acute massive pulmonary embolism (PE)

CONTRAINDICATIONS:
1. Active internal bleeding
2. Intracranial neoplasm, arteriovenous malformation, or aneurysm
3. Severe uncontrolled hypertension
4. Bleeding diathesis
5. Intracranial or intraspinal surgery or trauma
6. Previous stroke
7. **Stroke:** intracranial or subarachnoid hemorrhage; serious head trauma; or, seizure at onset of stroke

PRECAUTIONS:
1. Avoid IM injections and non-essential handling of the patient due to increased bleeding risk
2. Increased risk of bleeding at previous puncture sites (i.e. IV access and blood draw sites)
3. Avoid extravasation

SIDE EFFECTS:
1. Bleeding
2. Hypersensitivity reactions
3. Nausea, vomiting
4. **Stroke:** cerebral edema or herniation; seizure; or, new ischemic stroke
5. **AMI:** arrhythmias; AV block; cardiogenic shock; heart failure; recurrent ischemia; myocardial rupture; pericardial effusion; pericarditis; cardiac tamponade; pulmonary edema; hypotension; or, fever
6. **PE:** pulmonary reembolization or edema; pleural effusion; or, thromboembolism

SPECIAL NOTES:
1. Pregnancy category C

ADMIINISTRATION: *if trained and authorized*
1. Adult: The typical maintenance dose is 0.9 mg/kg over 60 minutes following initial bolus. Follow physician ordered dosing.
2. Pediatric: Not recommended.

SPECIAL CONSIDERATIONS:
1. Alteplase may be administered during inter-facility transfers only.

MONITOR, REPORT, DOCUMENT
2. Monitor vital signs. Reassess patient frequently for possible bleeding problems or any decrease in neurological function.

3. In cases of severe bleeding or a decline in the patient's neurological function, stop infusion and contact medical control immediately.

END

Ampicillin-sulbactam (Unasyn)

PARAMEDIC/CCTP/RN

ACTION:

7. Antibiotic, Antibacterial.
8. It inhibits the third and final stage of bacterial cell wall synthesis in binary fission, which ultimately leads to cell lysis.

INDICATIONS:

1. Treatment of infections due to susceptible organisms in skin and skin structures, intra-abdominal infections, and gynecologic infections.

CONTRAINDICATIONS:

1. Hypersensitivity to penicillins.
2. Mononucleosis.
3. Viral infections including CMV, viral respiratory infections, lymphatic leukemia.

PRECAUTIONS:

1. Hypersensitivity to cephalosporins
2. Renal disease
3. GI disease
4. History of allergies or allergic conditions such as asthma
5. Pregnancy and lactation
6. Ampicillin class antibiotics should not be administered to patients with mononucleosis

ADVERSE REACTIONS AND SIDE EFFECTS:

11. Nausea
12. Diarrhea
13. Headache
14. Seizure may be induced by too rapid administration
15. Pain at IM injection site
16. Pain at IV injection site
17. Thrombophlebitis
18. Decreased hemoglobin
19. Increased BUN and creatine
20. Presence of RBCs and hyaline casts in urine

ADULT ADMINISTRATION:

1. Physician ordered dose.
2. (Over 40 kg) 1.5-3 g every 6 hours, maximum dose of Sulbactum = 4 g/day
    A. Ex. 1.5 g dose = 1.0 g Ampicillin and 0.5 g Sulbactam

PEDIATRIC ADMINISTRATION:

1. Physician ordered dose.
2. (Over 1 year) 300 mg/kg/day divided every 6 hours

SPECIAL CONSIDERATIONS:
1. May only be administered by Paramedic, Critical Care Paramedic, or approved RN.
2. Infuse solutions of less than 50 ml over 10-15 min and solutions of 50-100 ml over 15-30 min.
3. With solutions of 100 ml or more, set rate according to amount of solution.
4. Serious and occasionally fatal anaphylactic reactions have been reported.

END

Back to Index ↑

Anzemet (Dolasetron)

PARAMEDIC/CCTP/RN

DRUG ACTION:
Antiemetic, GI stimulant (increases peristalsis).

INDICATIONS FOR USE:
1. Nausea and vomiting.

CONTRAINDICATIONS:
1. Allergy to the drug.
2. No IV administration in cancer/chemo induced nausea and vomiting due to QT prolongation risk.
3. Caution in patients at risk for QT prolongation.

SIDE EFFECTS:
Headache Dizziness
Lightheadedness
Diarrhea
Blurred vision
Sedation

SPECIAL NOTES:
Pregnancy category B

ADMINISTRATION: *if trained and authorized*
Adult: 12.5mg IV over 2 minutes
Pediatric: 0.35 mg/kg IV (max dose 12.5mg)

MONITOR, REPORT, DOCUMENT:
Monitor EKG and Vitals, Report to ED Staff, and document usage, dosage and changes in patient conditions.

END

Azithromycin (Zithromax)

PARAMEDIC/CCTP/RN

ACTION:
1. Bactericidal and bacteriostatic to select organisms including anaerobic and facultative gram positive and gram negative organisms, Chalmydophila and Mycoplasma.

INDICATIONS:
4. Treatment of community acquired pneumonia and pelvic inflammatory disease caused by specific organisms.
5. Non-gonococcal urethritis and cervicitis due to Chlamydia trachomatis.
6. Mycobacterial Infections.

CONTRAINDICATIONS:
1. Known Hypersensitivity.
2. Erythromycin allergy.
3. Any macrolide antibiotic allergy.
4. Ketolide antibiotic allergy.

PRECAUTIONS:
1. Monitor vitals closely
2. May aggravate CHF
3. Renal insufficiency

ADVERSE REACTIONS AND SIDE EFFECTS:
1. Abdominal pain
2. Arrhythmias
3. Dizziness
7. Hypotension
8. Facial edema
9. Jaundice
10. Nausea
11. Vomiting
12. Diarrhea

ADULT ADMINISTRATION:
1. Physician ordered dose.
2. 500 mg daily for minimum of prescribed days

PEDIATRIC ADMINISTRATION:
1. Not for Pediatric patients

SPECIAL CONSIDERATIONS:
1. Do not use anti-diarrhea products or narcotic pain medications if you have any of the side effects because these products may make them worse
2. Do not take antacids that contain aluminum or magnesium within 2 hours before or after you take azithromycin they will make azithromycin less effective.

END

Ceftriaxone (Rocephin)

PARAMEDIC/CCTP/RN

ACTION: Preferentially binds to one or more of the penicillin binding proteins located on cell walls of susceptible organisms. This inhibits third and final stage of bacterial cell wall synthesis, thus killing the bacterium. Similar to other third-generation cephalosporins, it is effective against serious gram-negative organisms, and also penetrates the CSF in concentrations useful in treatment of meningitis.

INDICATIONS: Infections caused by susceptible organisms in lower respiratory tract, skin structures, urinary tract, bones, and joints; also intra-abdominal infections, pelvic inflammatory disease, uncomplicated gonorrhea, meningitis, and surgical prophylaxis.

CONTRAINDICATIONS:
1. Hypersensitivity to ceftriaxone or other cephalosporin antibiotics
2. Viral infection
3. S & S of gallbladder disease
4. Neonates with hyperbilirubinemia

5. Neonates receiving calcium-containing infusions or TPN
6. Premature neonates

PRECAUTIONS:
1. Hypersensitivity to penicillin and beta-lactam antibiotics
2. Coagulopathy
3. Impaired vitamin K synthesis
4. Chronic hepatic disease
5. History of GI disease
6. Colitis
7. Renal disease or impairment
8. Pregnancy

ADVERSE REACTIONS AND SIDE EFFECTS:
1. GI (nausea, vomiting, diarrhea)
2. Leukopenia (Lower WBC count)
3. Pain at injection site

ADULT ADMINISTRATION:
1. Physician ordered dose.
2. Moderate to Severe Infections: 1-2 g every 12-24 hrs, max 4 g/day
3. Meningitis: 2 g every 12 hrs

PEDIATRIC ADMINISTRATION:
1. Physician ordered dose.
2. Moderate to Severe Infections: 50-75 mg/kg/day in 2 divided doses (max 2 g/day)
3. Meningitis: 100 mg/kg/day in 2 divided doses (max 4 g/day)

SPECIAL CONSIDERATIONS:
1. Infuse over 30 minutes, use smaller needles, larger veins.

END

Back to Index ↑

Ciprofloxacin (Cipro)

PARAMEDIC/CCTP/RN

ACTION: Inhibits DNA-gyrase, an enzyme required for DNA replication, transcription, repair, and recombination of bacterial DNA. Effective against many gram-positive and gram-negative organisms.

INDICATIONS:
1. UTI
2. Lower respiratory tract infections
3. Skin and skin structure infections
4. Bone and joint infections
5. GI infections or infectious diarrhea
6. Chronic bacterial prostatitis
7. Nosocomial pneumonia
8. Inhalation anthrax

CONTRAINDICATIONS:

1. Known hypersensitivity to ciprofloxacin or other quinolones
2. Syphilis
3. Viral infection
4. Tendon inflammation or tendon pain
5. Lactation

PRECAUTIONS:

1. Known or suspected CNS disorders (i.e., severe cerebral arteriosclerosis or seizure disorders)
2. Myasthenia gravis
3. Myocardial ischemia, a-fib, QT prolongation, CHF
4. GI disease, colitis
5. CVA
6. Uncorrected hypokalemia
7. Patients receiving theophylline derivatives or caffeine
8. Severe renal impairment and crystalluria during ciprofloxacin therapy
9. Patients on coumadin therapy
10. Pregnancy
11. Children

ADVERSE REACTIONS AND SIDE EFFECTS:

1. **GI:** Nausea and vomiting, Diarrhea, Cramps, Gas, and Pseudomembranous colitis.
2. **Musculoskeletal:** Tendon rupture, Cartilage erosion.
3. **CNS:** Headache, Vertigo, Malaise, Peripheral neuropathy, Seizures (especially with rapid IV infusion).
4. **Skin:** Rash, phlebitis, pain, burning, pruritus, and erythema at infusion site
5. **Special Senses:**
   A. Local burning and discomfort, crystalline precipitate on superficial portion of cornea.
   B. Lid margin crusting, scales, foreign body sensation, itching and conjunctival hyperemia.

ADULT ADMINISTRATION:

1. Physician ordered dose.
2. Moderate to Severe Systemic Infections: 200-400 mg every 8-12 hrs
   A. Infuse over 60minutes. Avoid rapid infusion and use of small veins.
   B. Discontinue other IV infusions while infusing or infuse through another site.

PEDIATRIC ADMINISTRATION: NOT FOR PEDIATRIC PATIENTS

END

Back to Index ↑

Compazine (Prochlorperazine)

PARAMEDIC/CCTP/RN

DRUG ACTION:

1. Antiemetic, GI stimulant (increases peristalsis)

INDICATIONS FOR USE:

4. Nausea and vomiting (adults)

CONTRAINDICATIONS:

8. Known allergy to Compazine
9. Patient less than 6 months old
10. Prolonged QT
11. Caution in patients with History of dystonic reaction.

SIDE EFFECTS:
7. Hypotension Dizziness Drowsiness
8. Extrapyramidal reaction
9. Motor restlessness (akathisia)
10. Dystonia (may be treated with Benadryl 25-50mg adult or 1mg/kg for pediatric)

SPECIAL NOTES:
4. Pregnancy category C

ADMIINISTRATION: *if trained and authorized*
3. Adult: 5-10mg IV/IM
4. Pediatric: Patient 6 months to 2 years: 0.15/mg/kg dose IV/IM not to exceed 10mg
5. Greater than 2 years old: 0.25-0.5 mg/kg IV/IM (max 25mg)

MONITOR, REPORT, DOCUMENT:
2. Monitor vital signs and EKG

END

Enalapril (Vasotec)

PARAMEDIC/CCTP/RN

DRUG ACTION: Angiotension Converting Enzyme Inhibitor (ACE inhibitor)

INDICATIONS FOR USE:
1. Hypertensive emergency (i.e.. BPs greater than 180, BPd greater than 110) with CHF/Pulmonary Edema

CONTRAINDICATIONS:
1. Allergy to med or class of drug
2. Previous problem with cough or tongue/lip swelling with ―some blood pressure med‖
3. Angioedema history
4. Pregnancy
5. Normal tensive or Hypotension patients

SIDE EFFECTS:
1. Hyperkalemia (chronic use)
2. Renal failure (chronic use)

SPECIAL NOTES:
1. Medical control contact required for on line orders
2. Third line agent and should not be considered until NTG and CPAP have been used
3. Pregnancy category : D

ADMINISTRATION: *if trained and authorized*
0.625 – 1.25mg IVP

MONITOR, REPORT, DOCUMENT
Monitor vitals, report to Doctor, document patient response.

END

Esomeprazole (Nexium)

PARAMEDIC/CCTP/RN

DRUG ACTION: Proton pump inhibitors work by decreasing the amount of acid produced by the stomach.

INDICATIONS FOR USE:
1. Short-term treatment of gastroesophageal reflux disease (GERD) with a history of erosive esophagitis.
2. Suspected or known upper GI bleed.
3. Zollinger-Ellison syndrome or cancer in which the stomach produces too much acid.

CONTRAINDICATIONS:
1. Known allergy or hypersensitivity to proton pump inhibitors.

PRECAUTIONS:
1. May cause injection site reactions
2. May increase risk of bone fractures with long-term use

SIDE EFFECTS:
1. Headache
2. GI upset
3. Nausea, vomiting, diarrhea

SPECIAL NOTES:
1. Pregnancy category B

ADMIINISTRATION: *if trained and authorized*
1. Adult: Standard dosing is an 80 mg bolus followed by an 8 mg/hour IV drip infusion. Otherwise, follow physician ordered dose.
2. Pediatric: Follow physician ordered dosing.

SPECIAL CONSIDERATIONS:
1. Proton pump inhibitors may be administered during inter-facility transfers only.

MONITOR, REPORT, DOCUMENT
1. Monitor vital signs. Report medication dosage and patient response to receiving facility.
2. Monitor for injection site reactions or signs of allergic reaction. If any such reactions occur, discontinue IV infusion immediately and contact medical control.

END

Fosphenytoin (Cerebyx)

PARAMEDIC/CCTP/RN

DRUG ACTION: Fosphenytoin is a water-soluble prodrug of phenytoin used to treat repetitive epileptic seizures. It works to block neuronal sodium channels and limiting the firing of action potentials, thereby slowing down the impulses in the brain that are responsible for seizure activity.

INDICATIONS FOR USE:
4. Control of generalized tonic-clonic status epilepticus
5. Seizure prophylaxis and treatment during neurosurgery

CONTRAINDICATIONS:
2. Sinus bradycardia, sinoatrial block, or 2nd or 3rd degree A-V block
3. Adams-Stokes syndrome
4. Concomitant delavirdine use

PRECAUTIONS:
3. Use caution is cases of hypotension, severe myocardial insufficiency, and hepatic or renal impairment.
4. If needed, adjust dosing gradually. Avoid rapid cessation (long-term use).
5. Lower doses may be used for elderly patients.

SIDE EFFECTS:
4. Nystagmus, dizziness, pruritus, paresthesia, headache, somnolence, ataxia, tinnitus, nausea
5. Cardiovascular collapse, hypotension, atrial and ventricular conduction depression, bradycardia
6. Rash, toxic epidermal necrolysis, multiorgan hypersensitivity, hepatotoxicity
7. Ventricular fibrillation
8. CNS depression
9. Hyperglycemia

SPECIAL NOTES:
2. Pregnancy category D

ADMIINISTRATION: *if trained and authorized*
3. Adult: The dosing for fosphenytoin is measured in phenytoin sodium equivalents (PE). Typical loading dose is 15-20mg PE/kg administered at 100-150mg PE/minute, followed by a maintenance dose of 4-6mg PE/kg/day. Follow physician ordered dosing.
4. Pediatric: Not established. Follow physician ordered dosing.

SPECIAL CONSIDERATIONS:
2. Fosphenytoin may be administered during inter-facility transfers only.

MONITOR, REPORT, DOCUMENT
3. Monitor vital signs, including cardiac monitoring, during transport. Reassess patient frequently for possible adverse reactions.
4. Immediate discontinuation of fosphenytoin is recommended in cases of hepatotoxicity and toxic epidermal necrolysis. Contact medical control if discontinuation is required.
5. If any other adverse reaction is observed, contact medical control immediately for recommendations.
6. Report administration of fosphenytoin to receiving facility upon arrival.

END

Flumazenil (Romazicon)

PARAMEDIC/CCTP/RN

DRUG ACTION:
1. Reversal of sedative effects of benzodiazepines

INDICATIONS FOR USE:
1. Known pure benzodiazepine overdose, Versed reversal.
2. To be used only with the approval of on-line medical control.

CONTRAINDICATIONS:
1. Allergy to the drug
2. Cyclic antidepressant overdose, mixed overdose.
3. Dysrhythmias or wide QRS.

4. Chronic benzodiazepine use (will cause seizure).

SIDE EFFECTS:
1. Headache, dizziness, dysrhythmias, seizures, vomiting

SPECIAL NOTES:
1. Used in patients with respiratory failure secondary to pure benzodiazepine overdose.
2. Not to be used as part of routine unresponsive patient care. Contact medical control before administration
3. Pregnancy category C

ADMINISTRATION: *if trained and authorized*
1. Initial dose 0.2 mg IVP. Repeat dose to max of 1 mg if needed

MONITOR, REPORT, DOCUMENT:
1. Continuous ECG
2. Vital signs before and within 5 minutes after administration.

END

Gentamicin Sulfate

PARAMEDIC/CCTP/RN

ACTION: Medicine used to treat severe or serious bacterial infection

INDICATIONS:
1. Sulfite sensitivity.
2. Kidney disease.
3. Hearing loss or loss of balance due to ear problems
4. Parkinson's disease.
5. Neuromuscular disorder such as myasthenia gravis.

CONTRAINDICATIONS:
1. Hypersensitivity to gentamicin.

PRECAUTIONS:
1. Pregnancy.
2. The frequency of administration of gentamicin should be reduced in patients with impaired renal function.

ADVERSE REACTIONS AND SIDE EFFECTS:
1. Allergic reaction
2. Little or no urine
3. Decreased hearing or ringing in ears
4. Dizziness
5. Numbness
6. Seizures
7. Severe diarrhea
8. Abdominal cramps
9. Neurotoxicity
10. Nephrotoxicity

ADULT ADMINISTRATION:

2. Physician ordered dose.
3. 1.5 to 2 mg/kg loading dose over 1-1.5 hours, followed by 1 to 1.7 mg/kg IV or IM every 8 hours or 5 to 7 mg/kg IV every 24 hours

PEDIATRIC ADMINISTRATION:

1. Physician ordered dose.
2. 0 to 4 weeks, birth weight <1200 g: 2.5 mg/kg IV or IM every 18 to 24 hours
3. 0 to 1 week, birth weight >=1200 g: 2.5 mg/kg IV or IM every 12 hours
4. 1 to 4 weeks, birth weight 1200 to 2000 g: 2.5 mg/kg IV or IM every 8 to 12 hours
5. 1 to 4 weeks, birth weight >=2000 g: 2.5 mg/kg IV or IM every 8 hours
6. >1 month: 1 to 2.5 mg/kg IV or IM every 8 hours

SPECIAL CONSIDERATIONS:

1. Dosage should be adjusted for patients with renal impairment.
2. Monitor IV site for irritation or infiltration

END

Imipenem/Cilastatin

PARAMEDIC/CCTP/RN

ACTION: A potent broad spectrum antibacterial agent. Bactericidal for gram negative, gram positive and anaerobic organisms.

INDICATIONS:

Treatment of serious lower respiratory tract, urinary tract, skin and skin structure, bone and joint, gynecological, intrabdominal, and polymicrobic infections, bacterial septicemia and endocarditis.

CONTRAINDICATIONS:

1. known hypersensitivity

PRECAUTIONS:

2. Seizure potential
3. Use with caution on patients with impaired renal function

ADVERSE REACTIONS AND SIDE EFFECTS:

1. Anaphylaxis
2. Pruritus
3. Rash and urticaria
4. Abdominal pain
5. Abnormal clotting time
6. Burning at injection site

ADULT ADMINISTRATION:

1. Physician ordered dose.
2. Range from 250mg – 500mg over 1 hour every 6 to 8 hours. Dose based on severity of disease, susceptibility to pathogens, condition of patient age and weight.
3. Do not exceed 4 Gm/24hrs.

PEDIATRIC ADMINISTRATION:

1. Physician ordered dose.
2. Not recommended for pediatric patients with CNS infections because the risk of seizures.
3. Do not exceed 50mg/kg or 4 Gm/24hrs.
4. Infants 15-25mg/kg dose every 6 hours.

SPECIAL CONSIDERATIONS:

1. May only be administered by Paramedic , Critical Care Paramedics, or approved RN's.
2. Dilute in 10 ml of compatible solution for infusion.
3. Doses greater than 500mg's should be infused over 40-60 min

END

Back to Index ↑

Integrilin Drip (eptifibatide)

PARAMEDIC/CCTP/RN

DRUG ACTION: Used in the treatment of cardiac patients with signs/symptoms of ischemia or AMI. Also used in cardiac catheterization labs to reduce complications. These drugs are reversible antagonists of fibrinogen binding to prevent platelet aggregation.

INDICATIONS:

1. Recent AMI with ischemia. **Contact medical control prior to administration.**

CONTRAINDICATIONS:

1. A history of bleeding diathesis, or evidence of active abnormal bleeding within the previous 30 days.
2. Severe hypertension (systolic blood pressure >200 mmHg or diastolic blood pressure >110 mmHg).
3. Major surgery within the preceding 6 weeks.
4. History of stroke within 30 days or any history of hemorrhagic stroke.
5. Current or planned administration of another parenteral GP IIb/IIIa inhibitor.
6. Dependency on renal dialysis.
7. Known hypersensitivity to any component of the product

ADVERSE REACTIONS/SIDE EFFECTS:

1. Bleeding is the most common complication encountered during INTEGRILIN therapy.
2. Because INTEGRILIN inhibits platelet aggregation, caution should be employed when it is used with other drugs that affect hemostasis, including thrombolytics, oral anticoagulants, NSAIDs, and dipyridamole.
3. Use with other GP IIb/IIIa inhibitors should be avoided.

ADMINISTRATION: *if trained and authorized*

2. The glycoprotein inhibitor infusion MUST BE maintained on an IV pump at the ordered rate of infusion.
3. Check the infusion frequently to ensure it is infusing at the correct rate.
4. Observe the IV site for any signs of infiltration – if this occurs, discontinue the site and apply a pressure dressing. Restart the line as soon as possible and continue with the same rate of infusion. Make note of the length of time the infusion was stopped and report to staff at the receiving facility.
5. Monitor the patient for any potential hemorrhage especially at infusion sites, other needle stick sites and mucous membranes. If bleeding or suspected bleeding is noted which cannot be controlled with direct pressure, follow transfer orders or contact Medical Control for instructions.
6. The recommended adult dosage of eptifibatide in patients with acute coronary syndrome and normal renal function is an intravenous bolus of 180 mcg/kg as soon as possible following diagnosis, followed

by a continuous infusion of 2.0 mcg/kg/min until hospital discharge or initiation of CABG surgery, up to 72 hours.
7. Integrilin may be administered in the same intravenous line as alteplase, atropine, dobutamine, heparin, lidocaine, meperidine, metoprolol, midazolam, morphine, nitroglycerin, or verapamil. Integrilin should not be administered through the same intravenous line as furosemide.

PEDIATRIC CONSIDERATIONS:
2. Medical Control must initiate.

MONITOR, REPORT, DOCUMENT: Continuous EKG and Vital signs within 5 minutes after administration

END

Back to Index ↑

Insulin (Humulin-R, Novolin-R, Humalog)

PARAMEDIC/CCTP/RN

DRUG ACTION: Insulin is a hormone produced by the body that is responsible for the regulation of blood glucose levels.

INDICATIONS FOR USE:
6. Severe hyperglycemia
7. Diabetic ketoacidosis (DKA)

CONTRAINDICATIONS:
5. Known hypoglycemia

PRECAUTIONS:
6. Short-term insulins, such as those used in cases of diabetic ketoacidosis, reduce blood glucose levels rapidly. Monitor blood glucose levels frequently.

SIDE EFFECTS:
10. Hypoglycemia
11. Hypokalemia
12. Local or systemic allergy
13. Edema

SPECIAL NOTES:
3. Pregnancy category B

ADMIINISTRATION: *if trained and authorized*
5. The dosing will vary depending on patient's status and blood glucose levels. Follow physician ordered dosing.

SPECIAL CONSIDERATIONS:
3. Insulin may be administered during inter-facility transfers only.

MONITOR, REPORT, DOCUMENT
7. Monitor vital signs during transport.
8. Check blood glucose frequently (every 20-30 minutes) during transport.
9. Contact medical control when blood glucose level falls below 200 mg/dL or if any adverse reaction is noted during transport.

END

Metoclopramide (Reglan)

PARAMEDIC/CCTP/RN

DRUG ACTION:
2. Antiemetic; GI stimulant - increases peristalsis

INDICATIONS FOR USE:
1. Nausea and vomiting

CONTRAINDICATIONS:
1. Allergy to metoclopromide or procaine/procainamide
2. History of pheochromocytoma, seizure disorder, kidney or liver failure, Parkinson's disease, GI bleeding, bowel obstruction.
3. History of dystonic reaction.

SIDE EFFECTS:
1. Fatigue, Drowsiness
2. Dystonic reactions (muscle spasm, fixed postures, strange movement patterns

SPECIAL NOTES:
1. Diphenhydramine (Benadryl) can be used to treat dystonic reactions
2. Pregnancy category B

ADMINISTRATION: *if trained and authorized*
1. ADULTS: 10 mg over 1-2 minutes IV bolus or ODT tablet
2. Not used in children

MONITOR, REPORT, DOCUMENT:
1. Continuous ECG
2. Vital signs before and within 5 minutes after administration

END

Moxifloxacin (Avelox™)

PARAMEDIC/CCTP/RN

ACTION: It inhibits DNA gyrase, an enzyme required for DNA replication, transcription, repair, and recombination of bacterial DNA. Broad spectrum bactericidal agent against both gram-positive and gram-negative organisms.

INDICATIONS: Treatment of acute bacterial sinusitis, acute bacterial exacerbation of chronic bronchitis, community acquired pneumonia, skin and skin structure infections, bacterial conjunctivitis, and skin infection.

CONTRAINDICATIONS:
1. Hypersensitivity to moxifloxacin or other quinolones.
2. Moderate to severe hepatic insufficiency.
3. Syphilis .
4. History of prolonged QT interval on EKG.
5. History of acute MI, acute myocardial ischemia, ventricular arrhythmias, a-fib, bradycardia.
6. History of hypokalemia.
7. Patients receiving Class IA or Class III antiarrhythmic drugs.
8. Tendon pain.

9. Viral infection.
10. Lactation.
11. Torsades de pointes.

PRECAUTIONS:
1. CNS disorders
2. Cerebrovascular disease
3. Colitis, diarrhea, GI disease
4. Diabetes Mellitus
5. Seizure disorder
6. Mild or moderate heart insufficiency
7. Myasthenia gravis
8. Sunlight exposure
9. Pregnancy

ADVERSE REACTIONS:
1. **CNS**: Dizziness, Headache, and Peripheral neuropathy
2. **GI**: Nausea/vomiting, Abdominal pain/diarrhea, Taste perversion, Abnormal liver function, and Dyspepsia.
3. **Musculoskeletal**: Tendon rupture, and cartilage erosion,

ADULT ADMINISTRATION: Physician ordered dose.
1. 400 mg daily
2. Infuse over 60 minutes. AVOID RAPID OR BOLUS DOSE.

PEDIATRIC ADMINISTRATION:
1. Not recommended for peds.

SPECIAL CONSIDERATIONS:
1. May only be administered by Paramedic, Critical Care Paramedic, approved RN's.
2. Inspect IV injection site frequently for signs of phlebitis.

END

Nicardipine (Cardene)

AEMT, INTERMEDIATE, PARAMEDIC/CCTP/RN

DRUG ACTION: Produces relaxation of vascular smooth muscle with little or no negative inotropic effect and increases cardiac output, coronary blood flow, and myocardial oxygen supply without increasing cardiac oxygen demand.

INDICATIONS:
1. Short term treatment of hypertension.

CONTRAINDICATIONS:
1. Patients with advanced aortic stenosis because it may induce or exacerbate angina.
2. Known hypersensitivity to Nicardipine.

PRECAUTIONS:
1. Nicardipine should be titrated slowly in patients with heart failure and being treated with beta-blocker due to possible negative inotropic effect.
2. Use caution with impaired hepatic or renal failure; lower doses, slower titration, and close monitoring.

How supplied:
1. 0. 25mg/10mL vial (concentration = 2.5 mg/mL)

Infusion:
1. 50 mg Nicardipine (2 x 10mL vials) to 250 mL bag of NS. Yields a final concentration of 0.2 mg/mL
2. Should be clear colorless to yellow solution. Must be protected from sunlight.

Dosage and Administration:
1. Do not administer in the same IV line as any other infusion. To reduce the possibility of venous thrombosis, phlebitis, or local irritation administer through a large peripheral vein or central catheter and change IV site every 12 hrs. Monitor HR and BP continually during infusion and frequently following.
2. For gradual reduction in blood pressure:
   a. Initiate treatment at 2.5 – 5 mg/hr.
   b. If BP goal is not achieved: Rate increase by 2.5 mg/hr. every 15 minutes to a max. rate of 15 mg/hr.
   c. Upon achieving BP goal transfer to oral therapy as clinical condition permits when infusion is stopped.

IV Dosage Chart:

Dose (mg/hr.)	IV Rate (mL/hr.)
2.5	12.5
5	25
7.5	37.5
10	50
12.5	62.5
15	75

Adverse reactions:
CNS: Headache, confusion
GI: Nausea, vomiting
Skin: Rash, angioedema
CV: hypotension, angina, tachycardia
GU: urinary frequency
Respiratory: breathing difficulty, wheezing

Antidote: Monitor BP, HR, cardiac and respiratory fundctions, place patient in Trendelenburg position, use vasopressors (Dopamine) for excessive hypotension, IV calcium gluconate may reverse effects of calcium entry blockade.
END

Norepinephrine (Levophed)

PARAMEDIC/CCTP/RN

DRUG ACTION: Stimulates alpha-receptors in arterial and venous beds and $beta_1$ receptors of the heart, resulting in peripheral vasoconstriction and increased heart rate and contractility. Coronary vasodilation is a secondary result of enhanced myocardial contractility.

INDICATIONS FOR USE:
8. Profound hypotension
9. Cardiac arrest
10. Sepsis and septic shock

CONTRAINDICATIONS:
6. Hypotension due to blood volume deficits
7. Mesenteric or peripheral vascular thrombosis

8. Profound hypoxia or hypercarbia
9. Simultaneous cyclopropane and halothane anesthesia

PRECAUTIONS:
7. Risk of ventricular tachycardia or fibrillation when used with cyclopropane and halothane anesthesia
8. Caution with MAOIs, triptyline or imipramine antidepressants
9. May cause prolonged hypertension

SIDE EFFECTS:
14. Hypertension
15. Ischemic injury
16. Reflex bradycardia
17. Arrhythmias
18. Anxiety
19. Transient headache
20. Respiratory difficulties
21. Extravasation tissue necrosis
22. Volume depletion (more prominent with long-term use)

SPECIAL NOTES:
4. Pregnancy category C

ADMIINISTRATION: *if trained and authorized*
6. Adult: The typical maintenance dose starts at 2-4 mcg/min and is titrated to maintain a systolic blood pressure of 80-100. Follow physician ordered dosing.
7. Pediatric: Not recommended.

SPECIAL CONSIDERATIONS:
4. Norepinephrine may be administered during inter-facility transfers only.

MONITOR, REPORT, DOCUMENT
10. Monitor vital signs. Reassess blood pressure every 5 minutes during transport. Report medication dosage and patient response to receiving facility.
11. Monitor patient closely for any negative response and contact medical control immediately if patient is no longer tolerating the medication.

END

Packed Red Blood Cells

PARAMEDIC /CCTP/ R.N. CARE *If trained and authorized in addition to above:*

1. Maintain oxygen flow rate for an oxygen saturation of greater than or equal to 92%.
2. Attach cardiac monitor.
3. Assess and record vital signs, to include temperature, prior to transfer and every 5 to 10 minutes enroute.
4. Reassess patient frequently during transport and document findings.
5. Collect all transfer documentation: transfer sheet, EKG's, lab, other pertinent information.
6. Contact the online medical director (medical control), document order, indication, and rate of administration for packed red blood cells.
7. Document the unit blood bank number of all units to be transferred with the patient.
8. Instruct patient to report onset of any unusual symptoms that might indicate a transfusion reaction:
    A. Chills, dizziness, back pain, restlessness, nausea, chest pain, headache, anxiety, dyspnea.

9. Watch for signs of a transfusion reaction:
    A. Temperature elevation rash, facial flushing cyanosis sweating, bradycardia tachycardia hypotension, distended neck veins.
10. If a transfusion reaction is suspected:
    A. Discontinue the transfusion, save the remaining blood, bag and tubing. Disconnect tubing from IV line.
    B. Maintain IV with normal saline.
    C. Notify online medical director.
    D. Draw a blue top tube from a site other than the infusing IV.

END

Pantoprazole (Protonix)

PARAMEDIC/CCTP/RN

DRUG ACTION: Proton pump inhibitors work by decreasing the amount of acid produced by the stomach.

INDICATIONS FOR USE:
11. Short-term treatment of gastroesophageal reflux disease (GERD) with a history of erosive esophagitis.
12. Suspected or known upper GI bleed.
13. Zollinger-Ellison syndrome or cancer in which the stomach produces too much acid.

CONTRAINDICATIONS:
10. Known allergy or hypersensitivity to proton pump inhibitors.

PRECAUTIONS:
10. May cause injection site reactions
11. May increase risk of bone fractures with long-term use

SIDE EFFECTS:
23. Headache
24. GI upset
25. Nausea, vomiting, diarrhea

SPECIAL NOTES:
5. Pregnancy category B

ADMIINISTRATION: *if trained and authorized*
8. Adult: Standard dosing is an 80 mg bolus followed by an 8 mg/hour IV drip infusion. Otherwise, follow physician ordered dose.
9. Pediatric: Follow physician ordered dosing.

SPECIAL CONSIDERATIONS:
5. Proton pump inhibitors may be administered during inter-facility transfers only.

MONITOR, REPORT, DOCUMENT
12. Monitor vital signs. Report medication dosage and patient response to receiving facility.
13. Monitor for injection site reactions or signs of allergic reaction. If any such reactions occur, discontinue IV infusion immediately and contact medical control.

Piperacillin-tazobactam (Zosyn™)

PARAMEDIC/CCTP/RN

DRUG ACTION: Penicillin-type antibiotics used to treat a wide range of bacterial infections.

INDICATIONS FOR USE:
14. Susceptible intra-abdominal infections
15. Community-acquired or nosocomial pneumonia
16. Postpartum endometritis
17. Pelvic inflammatory disease
18. Sepsis

CONTRAINDICATIONS:
11. Known allergy to cephalosporin, β-lactamase inhibitor, or other penicillin-type drugs

PRECAUTIONS:
12. Caution in cases of renal dysfunction
13. Higher doses increase seizure risk
14. Discontinue immediately if hypersensitivity reactions, skin rashes, or bleeding disorders occur

SIDE EFFECTS:
26. Nausea, diarrhea, constipation
27. Headache
28. Insomnia
29. Rash
30. Pruritis
31. Agitation
32. Pain
33. Hypertension
34. Dizziness
35. Edema
36. Local reactions at infusion site
37. Bleeding (rare)

SPECIAL NOTES:
6. Pregnancy category B

ADMIINISTRATION: *if trained and authorized*
10. Adult: Typical dose is 2.25-4.5 g over 30 minutes, depending on reason for administration. Follow physician ordered dosing.
11. Pediatric: Not recommended for children less than 2 months of age. Typical dose is 80/10mg-100/12.5mg per kg over 30 minutes. Follow physician ordered dosing.

SPECIAL CONSIDERATIONS:
6. Piperacillin-tazobactam may be administered during inter-facility transfers only.

MONITOR, REPORT, DOCUMENT
14. Monitor vital signs. Stop infusion immediately and contact medical control if a skin reaction or breathing problem develops. Report medication dosage and patient response to receiving facility.

END

END

Potassium (k)

PARAMEDIC/CCTP/ R.N. CARE *If trained and authorized in addition to above:*

IV Infusion of Potassium (K) may be monitored by Paramedic, CCTP, and approved RN's:

Potential adverse effects:

1. Fluid overload if fluids are allowed to infuse too quickly
2. Hyperkalemia if potassium containing fluids are allowed to infuse off the pump.
   A. Signs of hyperkalemia: Numbness and tingling, weakness, bradycardia, hypotension, ECH changes such as tall peaked T waves and widened QRS complex.

Procedure:

1. Obtain patient report from the RN caring for the patient at the transferring facility with special attention to the following:
   A. Patient condition including recent set of vital signs
   B. All drugs and IV solutions currently being infused – know rate of infusion for each.
   C. Transfer orders
2. Solutions containing potassium MUST be maintained on an IV pump at all times during the transport at a rate not to exceed 250 ml per hour. (10 mEq per hour)
3. Concentration of potassium not to exceed 40 milliequivalents per 1000ml fluid
4. Check the infusion frequently to ensure that it is infusing at the correct rate.
5. Observe the IV site for signs of infiltration – if this occurs, discontinue the site and apply a dressing. Restart the line as soon as possible and continue with the same rate of infusion. Do not try to "catch up" on the infusion. Make note of the time the infusion was stopped and restarted. Report this to staff at the receiving facility. Document appropriately.
6. IV solutions containing potassium are not compatible with many drugs including epinephrine, atropine sulfate and diazepam.
7. **Do not administer drugs through the IV line that contains potassium.**
8. Contact Medical Control or the receiving facility if any problems or questions regarding the IV infusion while enroute.

END

Proparacaine (Opthane, Alacane)

PARAMEDIC/CCTP/RN

DRUG ACTION: Topical anesthetic

INDICATIONS:

1. Suspected corneal abrasion
2. Burns to the eye
3. Foreign body in eye

CONTRAINDICATIONS:

1. Hypersensitivity
2. Ruptured globe

PRECAUTIONS:

1. The patient should never be allowed to rub or touch eyes.
2. After administration, remaining medication should be discarded to minimize the risk of infection.

ADVERSE REACTIONS/SIDE EFFECTS:
1. None

ADMINISTRATION: *if trained and authorized*
1. 1-2 drops in each affected eye
2. May repeat every 15 minutes

PEDIATRIC CONSIDERATIONS:
1. Administer 1-2 drops in each affected eye; may repeat every 15 minutes as needed.

Special Considerations:
1. Patient should be transported if this medication has been given. If patient refuses transportation by ambulance, explain that they need to have additional medical care and need to be seen at an emergency department. Document their hospital choice.
2. Solution must be clear. If solution is yellow, do not use.

MONITOR, REPORT, DOCUMENT:
1. QRS duration
2. ECG changes
3. Vital signs before and within 5 minutes after administration

END

Back to Index ↑

Promethazine (Phenergan)

PARAMEDIC/CCTP/RN

DRUG ACTION: Antihistamine, Antiemetic

INDICATIONS FOR USE:
1. Nausea and Vomiting
2. Motion sickness

CONTRAINDICATIONS:
1. Allergy to the drug
2. Comatose states
3. Patients with history of dystonic reactions (Excessive muscle tone, muscle spasm and postural abnormalities after taking certain medications)
4. Seizure disorders
5. Hypotension

6. Current bronchospasm secondary to asthma or COPD
7. Concomitant use of other anticholinergic drugs (Atropine, Monoamine Oxidase Inhibitors, etc.) Patient with history of Neuroleptic Malignant Syndrome (NMS)
8. Patients who are CNS depressed (alcohol, barbiturates, narcotics) Children with unknown etiology for vomiting

SIDE EFFECTS
1. Sedation & Respiratory depression
2. May impair mental and physical ability
3. Allergic reaction
4. Dysrhythmias (tachycardia. bradycardia) Blurred vision (dilated pupils)
5. Dystonic reactions (muscle spasm, fixed postures, strange movement patterns) Lower seizure threshold

SPECIAL NOTES:
1. Use with caution in patients who are using other sedating medications
2. Use precaution in patients with asthma, peptic ulcer, and bone marrow depression
3. IM injection is the preferred route (take care to avoid intra-arterial injection)
4. Dystonic reactions can be treated with Diphenhydramine (Benadryl) 25-50mg IVP
5. Pregnancy Safety - Category C (generally considered safe for use during labor)

ADMINISTRATION: *if trained and authorized*

1. **Adult:** 12.5 – 25mg IV or IM (IM injection is preferred)
2. **Pediatric:** 0.5 – 1mg/kg IV or IM (IM injection is preferred) Not for younger than 2 y/o

MONITOR, REPORT, DOCUMENT:
1. Vital signs within 5 min of administration.
2. Document any Altered LOC, Drowsiness, Dysrhythmias, and the effectiveness

END

Back to Index ↑

Propofol (Diprivan™)

PARAMEDIC/CCTP/RN

Drug Action: Short-acting hypnotic agent used during general anesthesia.

INDICATION FOR USE: Provide sedation to patients with controlled ventilation.
1. Initiation and maintenance of sedation of intubated, mechanically ventilated patients.

CONTRAINDICATIONS:
1. Patients should not receive this medication if allergic to Propofol, eggs, soy products, or soy beans.

PRECAUTIONS:
1. Patients should be continuously monitored for early signs of hypotension and/or bradycardia.
2. Apnea requiring ventilatory support often occurs during induction and may persist for > 60 seconds.

3. Medical use requires caution when administered to patients with disorders of lipid metabolism such as primary hyperlipoproteinemia, diabetic hyperlipemia, and pancreatitis.
4. When injected to a patient who is epileptic, there is a risk of seizure during the recovery phase.

ADVERSE REACTIONS AND SIDE EFFECTS:
Allergic reactions: Hives, Difficulty breathing, Swelling of face, lips, tongue, or throat.
Other S/E: Seizure, Respiratory insufficiency, Fast or slow HR, Nausea and/or Green color urine.

ADULT ADMINISTRATION:
1. Sedation: 100-150 mcg mcg/kg/minute for at least 5 minutes, followed by maintenance infusion of 25-75 mcg/kg/minute.
2. For intubated patient: May increase 5mcg/kg/min every 5 minutes based on required sedation.

mcg./kg./ min.	Patient weight in Kg.											
	35	40	45	50	55	60	65	70	75	80	90	100
5 mcg	1.05	1.2	1.35	1.5	1.65	1.8	1.95	2.1	2.25	2.4	2.7	3
10 mcg	2.1	2.4	2.7	3	3.3	3.6	3.9	4.2	4.5	4.8	5.4	6
20 mcg	4.2	4.8	5.4	6	6.6	7.2	7.8	8.4	9	9.6	10.8	12
30 mcg	6.3	7.2	8.1	9	9.9	10.8	11.7	12.6	13.5	14.4	16.2	18
40 mcg	8.4	9.6	10.8	12	13.2	14.4	15.6	16.8	18	19.2	21.6	24
50 mcg	10.5	12	13.5	15	16.5	18	19.5	21	22.5	24	27	30
60 mcg	12.6	14.4	16.2	18	19.8	21.6	23.4	25.2	27	28.8	32.4	36
70 mcg	14.7	16.8	18.9	21	23.1	25.2	27.3	29.4	31.5	33.6	37.8	42
80 mcg	16.8	19.2	21.6	24	26.4	28.8	31.2	33.6	36	38.4	43.2	48
90 mcg	18.9	21.6	24.3	27	29.7	32.4	35.1	37.8	40.5	43.2	48.6	54
100 mcg	21	24	27	30	33	36	39	42	45	58	54	60
150 mcg	31.5	36	40.5	45	49.5	54	58.5	63	67.5	72	81	90
200 mcg	42	48	54	60	66	72	78	84	90	96	108	120
250 mcg	52.5	60	67.5	75	82.5	90	97.5	105	113	120	135	150
300 mcg	63	72	81	90	99	108	117	126	135	144	162	180
Microdrips per minute (or mL/hour)						***Peds:*** 1-2.5 mg/kg IV over 1-2 minutes. Drip: 100-300 mcg/kg/minute.						

PEDIATRIC ADMINISTRATION:
1. Physician ordered dose.
2. Administration of fentanyl simultaneously with Propofol may result in serious bradycardia.

SPECIAL CONSIDERATIONS:
Not recommended for use in nursing mothers because Propofol has been reported to be excreted in human milk and the effects of oral absorption of small amounts of propofol are not known.
END

Thiamine

PARAMEDIC/CCTP/RN

DRUG ACTION: Allows breakdown of Glucose

INDICATIONS FOR USE:
1. Alcoholic patients and those who are malnourished

CONTRAINDICATIONS:
1. Allergy to the medication

SIDE EFFECTS:
1. None

SPECIAL NOTES:
1. Helpful prior to administration of glucose in alcoholic or those malnourished
2. Pregnancy category A

ADMINISTRATION: *if trained and authorized*

1. 100 mg IVP

MONITOR, REPORT, DOCUMENT:
Vital signs before and within 5 minutes after administration

END

Back to Index ↑

Total Parenteral Nutrition (TPN)

PARAMEDIC/CCTP/RN

DRUG ACTION: Total parenteral nutrition provides all daily nutritional requirements.

INDICATIONS FOR USE:
19. Non-functioning GI tract or requirement of complete bowel rest

CONTRAINDICATIONS:
12. No absolute contraindications

PRECAUTIONS:
15. Central line administration is preferred due to high risk of thrombosis at catheter site.

SIDE EFFECTS:
38. Hyper- or hypoglycemia
39. Hepatic complications
40. Abnormal levels of serum electrolytes and minerals

SPECIAL NOTES:
7. Pregnancy category B

ADMIINISTRATION: *if trained and authorized*
12. The dosing will vary depending on patient's nutritional requirements. Follow physician ordered dosing.

SPECIAL CONSIDERATIONS:
7. Total parenteral nutrition may be administered during inter-facility transfers only.

MONITOR, REPORT, DOCUMENT
15. Monitor vital signs during transport.
16. Check blood glucose frequently (every 20-30 minutes) during transport.
17. Discontinue administration and contact medical control if any adverse reaction is noted during transport.

END

Vancomycin (Vancocin)

PARAMEDIC/CCTP/RN

ACTION: A very potent tryicylic glycopeptide antibiotic, it is bactericidal against gram positive organisms.

INDICATIONS:
1. Serious gram positive infections.
2. Penicillin allergic patients
3. Endocarditis

CONTRAINDICATIONS:
1. Known Hypersensitivity.
2. Corn Products.

PRECAUTIONS:
1. Prolonged use can cause super infections that are not susceptible to antibiotic treatment.
2. Kidney problems.
3. Hearing problems.
4. Stomach and intestinal problems.

ADVERSE REACTIONS AND SIDE EFFECTS:
1. Chills
2. Dizziness
3. Fever
4. Fatigue
5. Rash/urticaria
6. Anaphylaxis
7. Flushing of the upper body
8. Easy bleeding or bruising
9. Diarrhea
10. Ringing in the ears
11. Change in the amount of urine

ADULT ADMINISTRATION:
1. Physician ordered dose.

2. 7.5mg/kg every 6 hours or 15mg/kg (1gm) every 12 hours for 7-10 days
3. Max dose: 3 – 4 gm/24 hrs

PEDIATRIC ADMINISTRATION:

1. Physician ordered dose.
2. 40mg/kg/24 hrs
3. Do not exceed 2 Gm in 24 hours

SPECIAL CONSIDERATIONS:

1. May only be administered by Paramedic, Critical Care Paramedics, and approved RN's.

END

Forms & Reference Section

NON TRANSPORT - The evaluation and/or treatment provided by Baldwin Ambulance Service (Baldwin Area EMS) is not a substitute for medical evaluation or treatment by a physician. You may believe that your health status does not seem serious, without a Physician's evaluation, you will not know if you require further medical attention. A decision to refuse treatment and transport by an ambulance may result in a delay which may allow your injury or illness to progress causing irreversible injury, illness or death. If symptoms worsen, I will call my physician, visit a Hospital, or call 9-1-1 for an ambulance.

By my electronic signature (or signature below) I agree to release and hold harmless Baldwin Ambulance Service (aka Baldwin Area EMS), the Village of Baldwin, including its members, agents, first responders, physician advisors, and consulting hospitals from any liability which may arise from my refusal of treatment and/or transport and agree I am responsible for and will be billed for scene response and supplies. I am the Patient, or Patient's Legal Guardian or Legal Parent and I received a copy of Baldwin Ambulance's Refusal of Treatment and/or Transportation guide below. HIPAA information may also be obtained at www.BaldwinAmbulance.com

I am the patient, parent of the patient, or legal guardian, I am at least 18 years of age, I am REFUSING Treatment and/or Transport as recommended by the Emergency Department Physician, and the E.M.T. of the Baldwin EMS Department and I agree to the legal notice above.

Patient's Name: _____ Gender: ❑ M ❑ F Age: _____

Address: _____ Date Of Birth: _____/_____/_____

City: _____ State: _____ ZIP: _____ Home Phone: ( ) _____-_____

Social Security #: _____-_____-_____ Nature of Injury/Illness: _____

Patient Signature: _____ Today's Date: _____

❑ **Patient deemed competent, but declines or refuses to sign form**

❑ **GOOD SAMARITAN INFORMATION - BLOOD OR BODY FLUID EXPOSURE**

Blood and body fluids from one person may be capable of transmitting certain diseases to another person. Some of the diseases that are of special concern include human immunodeficiency virus (HIV) infection (which causes AIDS), hepatitis and tetanus.

A person may become exposed to disease if they get blood or body fluids into their eyes, mouth, nose or other mucous membrane, on non-intact skin such as rashes or cuts, or exposed to them by puncture of the skin with a needle or other contaminated object. If you believe that you have been exposed to someone else's blood or body fluids, it is important for you to be promptly evaluated by a doctor. Most exposures will not cause an infection, but it is important to determine the risk of your exposure. There are medications available that can reduce the likelihood that you will become infected if your exposure was significant. The sooner you are evaluated and treated, the more likely a doctor will be able to prevent or reduce the risk of your exposure. **If there is a chance that you have been exposed, you should take the following actions immediately:**

Actions:

1. If you were exposed in your mouth, eyes, nose or other mucous membrane, flush the areas with lots of water as soon as possible. If you were exposed through non-intact skin, wash the area with soap and water as soon as possible.
2. Seek medical attention at a hospital emergency room as soon as possible. Inform the doctor treating you that the patient you were exposed to was transported by ambulance. You will be given instructions for how to follow-up on your test results and the results of the source patient with your own doctor. It will be helpful to the hospital if you know which vaccines (such as tetanus and Hepatitis B) you have had.

❑ **WOUNDS AND LACERATIONS**

Lacerations are cuts that leave a smooth or jagged wound in the skin. They may affect the top layer of skin, tissues below the skin, muscles, nerves and blood vessels. Good wound care and sutures (stitches), if required, will improve the healing of your wound, help prevent an infection, and may prevent permanent difficulty or inability to use an arm or leg normally. You have decided not to be transported by ambulance to a medical facility following a laceration or wound. Please contact your doctor if any of the following signs or symptoms develop:

✓ Increased pain, Swelling, numbness or tingling,, Redness or red streaks around the wound, Pus or drainage coming from the wound, Fever (101° F. or higher) or chills • Bleeding that cannot be controlled

Actions:

1. If the paramedics/EMTs have recommended, or you feel you should be evaluated for possible stitches, you should seek medical attention as soon as possible, and within 6 hours of the injury.
2. Clean the wound and keep it clean. Wash the wound with soap and water 2 - 3 times a day. Do not soak.
3. After washing, you may apply a small amount of an antibiotic ointment such as bacitracin or (available without prescription). Do not apply any ointment if you will be seeking immediate medical attention.
4. Cover the wound with gauze dressing. Band-Aids make the skin wet and increase the chance of infection.
5. Ibuprofen (such as Advil) or acetaminophen (such as Tylenol), if you are not allergic, may be taken as directed for pain or discomfort. Avoid taking aspirin (check with your doctor if you are currently taking aspirin on a regular basis).

6. Contact your doctor if it has been more than five years since your last tetanus shot or if you are uncertain when your last shot was. If needed, a tetanus shot should be given within 24 hours.

❑ **FAINTING AND DIZZINESS**

You have had a period of unconsciousness or near-unconsciousness. Fainting or dizziness episodes have a number of causes, some of which can be serious. It is very difficult to determine the exact cause without further testing or evaluation by a physician.
You have decided not to be transported by ambulance to a medical facility following an episode of fainting or dizziness. Please contact your doctor to notify him/her of this episode and if any of the following signs or symptoms develop:

✓ Chest or abdominal pain, Recurrent episodes, Bleeding anywhere, Headache or neck pain, Palpitations, Problems with your vision, Nausea and vomiting, Numbness or tingling, Problems walking, Weakness, Slow heart rate (less than 60 beats/min, Fast heart rate (greater than 100 beats/min).

Actions:

1. If you have not been getting enough food or fluids, eat a good meal and drink plenty of non-alcoholic fluids.
2. If you feel overheated, move to a cool place with fans or air-conditioning.
3. Lay down until you feel better. If you feel faint, elevating your legs may help.
4. Stay with a competent caregiver until your symptoms go away.

❑ **HEAD INJURY**

Head injuries can be potentially dangerous if bleeding or swelling results inside the head. You have decided not to be transported by ambulance to a medical facility following a possible head injury. Please contact your doctor if any of the following signs or symptoms develop:

✓ Drowsiness or increased irritability, Nausea and vomiting, Persistent or bad headache , Vision problems, Unequal pupils Speech or hearing difficulty, Weakness or loss of feeling in arms or legs, Difficulty walking, Bleeding or discharge from the nose or ears, Twitching or convulsions, Neck or back pain, Confusion, loss of memory, or loss of consciousness

Actions:

1. Awaken the patient every hour for the next 24 hours to make sure he/she can be easily aroused and can
2. answer simple questions (name, birthdate, etc.).
3. Do not take any sedatives, alcohol, or pain medications without checking with a doctor. Check with your
4. doctor if you are taking aspirin on a regular basis.
5. Apply cold to any tender/painful area on the head.

❑ **FOREIGN OBJECT INGESTION/CHOKING**

Sudden airway obstruction in an adult usually occurs during a meal. In a child, it generally occurs during mealtime or at play (choking on small objects placed into the mouth). Ingested objects/food can be dangerous if they block the passage of air into the lungs. Some ingested items that originally cause someone to choke are cleared by coughing, and then swallowed or spit out. Treatment depends on the size and location of the swallowed object. An object that gets stuck in the esophagus (food tube) must be removed as soon as possible. Once the object is in the stomach, it probably will pass through the body by itself without causing problems. This usually takes several days but may take 2 or 3 weeks. Pointed objects such as needles, nails, and toothpicks are more dangerous than round or smooth ones. Objects may be stuck in the lungs without causing current problems breathing. You have decided not to be transported by ambulance to a medical facility following a choking episode or the swallowing of a foreign object. Please contact your doctor if any of the following signs or symptoms develop:

✓ Vomiting, gagging, choking, or drooling, You do not see the swallowed object in the stool within a few days, Fever over 100°, Neck or throat pain, or the inability to swallow, Coughing, wheezing, or very noisy breathing,, Abdominal pain, bloody bowel movement, cramping, or bleeding from the rectum

Actions:

1. If the swallowed object was not removed, you should check the stools until the object has passed. Putting the stool in a strainer and running water over it may make the job easier.
2. There is no need to change your diet while waiting for the object to pass. Do not take any medicine such as laxatives to make the object pass sooner.
3. Keep small objects, including coins, out of the reach of infants and young children.
4. Contact an ambulance again by calling 911 if your condition worsens.

❑ **MOTOR VEHICLE CRASH**

Accidents involving motor vehicles can cause injuries that are sometimes not apparent at the time of the accident. Some of these injuries can be serious and are difficult to detect unless there is further testing and evaluation by a physician. These injuries include, but are not limited to head, neck, back, chest or abdominal injuries. Lacerations (cuts) and bruising are common and may require further care and evaluation. Good wound care and sutures (stitches), if required, will improve the healing of your wound, help prevent an infection, and may prevent permanent difficulty or inability to use an arm or leg normally. You have decided not to be transported by ambulance to a medical facility following a motor vehicle accident. Please contact your doctor if any of the following signs or symptoms develop:

✓ Increased pain to any body area, Swelling, numbness or tingling, Drowsiness or increased irritability, Nausea and vomiting Persistent or bad headache, Vision problems, Unequal pupils, Speech or hearing difficulty, Weakness or loss of feeling in arms or legs, Difficulty walking, Bleeding or discharge from the nose or ears, Twitching or convulsions, Neck or back pain, Confusion, loss of memory, or loss of consciousness.

Actions:

1. Awaken the patient every hour for the next 24 hours to make sure he/she can be easily aroused and can answer simple questions (name, birth date, etc.).
2. Do not take any sedatives, alcohol, or pain medications without checking with a doctor. Check with your doctor if you are taking aspirin on a regular basis.
3. Apply cold to any tender/painful area.
4. If the paramedics/EMTs have recommended, or you feel you should be evaluated for possible stitches, you should seek medical attention as soon as possible, and within 6 hours of the injury.
5. Clean the wound and keep it clean. Wash the wound with soap and water 2 - 3 times a day. Do not soak.
6. After washing, you may apply a small amount of an antibiotic ointment such as Bacitracin (available without prescription). Do not apply any ointment if you will be seeking immediate medical attention.
7. Cover the wound with gauze dressing. Band-Aids make the skin wet and increase the chance of infection.
8. Ibuprofen (such as Advil) or acetaminophen (such as Tylenol), if you are not allergic, may be taken as directed for pain or discomfort. Avoid taking aspirin (check with your doctor if you are currently taking aspirin on a regular basis).
9. Contact your doctor if it has been more than five years since your last tetanus shot or if you are uncertain when your last shot was. If needed, a tetanus shot should be given within 24 hours of the injury.

❑ **SPRAINS AND CONTUSIONS**

Sprains are painful injuries to joints that result from partial or complete tearing of ligaments. Contusions are collections of blood under the skin caused by damage to blood vessels. Fractures (broken bones) can present in similar ways and cannot be diagnosed without an x-ray. Signs and symptoms of sprains (and fractures) include pain or tenderness, swelling, bruising, and inability to use the joint.
You have decided not to be transported by ambulance to a medical facility following a possible sprain or contusion. Please contact your doctor if any of the following signs or symptoms develop:

✓ Bluish discoloration, Coldness to the injured area, Numbness or loss of feeling, Excessive pain or swelling, Continued inability to use or move the joint.

Actions:

1. For the first 24 hours, keep the injured joint elevated on pillows while lying down.
2. For the first 24 hours, apply cold every 2 hours for 20 - 30 minutes.
3. Ibuprofen (such as Advil) or acetaminophen (such as Tylenol) may be taken as directed for pain or discomfort. Avoid taking aspirin (check with your doctor if you are currently taking aspirin on a regular basis).

❑ **LOW BLOOD SUGAR**

You have had a period of unconsciousness or altered level of consciousness that may have been caused by a low level of sugar and may be related to your diagnosed condition of diabetes. The paramedics or EMTs from the ambulance service may have administered medication or sugar to improve your condition, but this improvement is often only temporary. It is important to have regular check-ups so that your doctor can help you control your blood sugar level, which can be controlled with medication and

proper diet. Staying as healthy as possible can also help keep your blood sugar in the normal range. You have decided not to be transported by ambulance to a medical facility following a probable low blood sugar episode. Please contact your doctor to notify him/her of this episode and if any of the following signs or symptoms develop:

✓ If the frequency or severity of your low blood sugar episodes increases.

Actions:

1. Take your medicine exactly as prescribed and eat right away. The sugar/medicine you were given is short acting.
2. Wear a medic alert tag at all times.
3. Have a responsible person wake you every 2 hours for the next 12 hours.
4. Check your blood sugar again in 1 – 2 hours to make sure it is okay and then test your urine or blood sugar as directed.
5. If you feel like your blood sugar is getting low, test it and eat as directed.
6. Stay with a competent caregiver, and teach family members and others close by how to help you when your blood sugar becomes too low.
7. Discuss with your doctor whether there should be any restrictions on your job or activities.

❑ **SEIZURES:** Seizures occur when a group of brain cells become inoperative. This disturbs the usual cooperation between the brain and the rest of the body, and causes muscles to move in an uncontrolled manner. It is very important to have regular check-ups so that your doctor can tell you why you have seizures. Seizures can be controlled with medicine. Your doctor will order tests routinely to be sure that you are getting the proper amount of medications. You have decided not to be transported by ambulance to a medical facility following a seizure. Please contact your doctor if any of the following symptoms develop:

- Change of frequency or type of seizure
- Periods of confusion, weakness, or loss of sensation occur
- if you have been injured as a result of a seizure
- if you think you have side effects from the medications

ACTIONS: (1) Take your medications exactly as prescribed by your doctor
(2) Do not drive until your doctor says it is O.K. You are required by law to inform the motor vehicle licensing department about your seizures
(3) If you feel like you are going to have a seizure go to a place where you will not get hurt. Never bathe or swim alone.
(4) Teach Friends and Family How to care for you when a seizure occurs. Wear a **"MEDIC ALERT"** Tag at all times.
(5) Discuss with a doctor whether there should be any restrictions for work or other activities

Contact an ambulance again by calling 911 if your condition worsens.

Customer Survey

In an effort to provide the best possible service to our patients, the following survey is sent with patient billing for feedback on your service to the patient. Surveys are shared with the crew as we receive them from the billing company.

Name of Patient: _____

Date of Transport: _____/_____/_____

Reason for Transport: _____

Fill out the following contact information if you would like a response.

Name (if different than patient): _____

Address: _____

City: _____ State: _____ Zip: _____

Email: _____@_____ . _____

Please rate your experience with Baldwin Ambulance (circle one):

Rating:	Excellent	Very Good	Average	Below	Poor	N/A
Timeliness of Response	5	4	3	2	1	0
Crew Appearance	5	4	3	2	1	0
Cleanliness of Ambulance	5	4	3	2	1	0
Crew Interaction w/ Patient	5	4	3	2	1	0
Care Received	5	4	3	2	1	0
Interaction w/ Billing Office	5	4	3	2	1	0
Overall Experience	5	4	3	2	1	0

Comments:

_____

_____

_____

_____

_____.

Thank you for your assistance in our continuous quality improvement process. We strive for the best at all times!

Back to Index ↑

Excuse from Training Form

Employee: _____

Date submitted: _____/_____/20___

I will be absent from training on _____/_____/ 20 ___

Reason for absence:

_____

_____.

I will make up the training by video, testing, reading, reviewing materials as assigned below by the Training Officer or Chief on the date listed.

Training topic: _____

The employee shall makeup the missed training session in the following manner:

❑ Video presentation ❑ Handouts

❑ 24/7 ❑ Testing

❑ other: _____

This should be completed by _____/_____/200 _____

Signed: _____
Training Officer or Chief

Date: _____/_____/200____

Back to Index ↑

Safe Haven for newborns survey form

BIRTH MOTHER:
Thank you for bringing your baby to Baldwin Area EMS station. Your decision will start the process to assure that your baby will be safe and well taken care of. We thank you for placing your baby with us. We will do everything we can to give your child the best possible care.

We would like you to help us plan for your child by giving us some health information. The information you provide will be used to assist in your baby's care. The information may not be used to identify or locate you.

Please complete this form to the best of your knowledge, and return it to the Baldwin Area EMS station: 630 Highway 12 – PO Box 138, Baldwin , WI 54002. Fax 715-684-4575.

1. What is the baby's birth date? _____
2. Was the baby premature? ❑ Yes ❑ No
3. Did you have any problems with your pregnancy or delivery? ❑ Yes ❑ No
If yes, what complications were experienced?
_____
_____

4. During your pregnancy did you use any of the following? (Check all that apply)
❑ Cigarettes
❑ Alcohol
❑ Drugs; List: _____
❑ Medications; List:_____

5. Please list any medical condition that you or the father may have:
Mother: ❑ Unknown ❑ Diabetes ❑ Asthma ❑ Seizures
❑ Allergies: _____
❑ Other: _____

Mothers Age: ____ Race: ❑ Caucasian ❑ Black ❑ Hispanic
❑ Asian ❑ Other: _____

Father: ❑ Unknown ❑ Diabetes ❑Asthma ❑ Seizures
❑ Allergies: _____
❑ Other: _____

Fathers Age: ____ Race: ❑ Caucasian ❑ Black ❑ Hispanic

❑ Asian ❑Other: _____

6. Is there anything that you would like to be shared with the Person(s) who will be caring for your child?
_____
_____
_____.

Although this may have been a difficult decision for you, your child may now be granted a very bright future. Thank you for making the right choice.

Back to Index ↑

Employee Exposure

Employee Name: _____ Today's Date: _____/_____/_____

Employee DOB: _____/_____/_____ Social Security #: _____-_____-_____

Time of Incident: _____ Date of Incident: _____/_____/_____

Length of exposure: _____ minutes Run Report #: _____

Exposure to Blood or Body Fluids:

Type of Body Fluid: ❑ Blood ❑ feces ❑ saliva/sputum
❑ amniotic fluid ❑ Urine ❑ wound discharge

Route/Type of Exposure:
❑eye(s) ❑ Mouth ❑ nose
❑ Other: _____

Skin Exposure: ❑ contaminated Needle ❑ uncontaminated Needle Stick ❑ puncture/incision
❑pierced ears ❑ open sore/lesions ❑ eczema
❑ exposure to intact skin

Clothing: ❑Soaked through ❑ drops/spray ❑diluted ❑ dried/caked

If there was an exposure to mucous membrane or skin, send employee for medical follow up, and complete first report of injury for worker's compensation. If clothing exposure, keep this form for file and counsel employee on safe work practices to prevent re-occurrence. Have employee change contaminated clothing or wash as appropriate.

Refusal of Medical Treatment after body fluid exposure

I have been exposed to blood and/or potentially infectious body fluids. I have reported this incident to the infectious control officer or chief or duty officer and have completed the appropriate paperwork as directed. The Chief or duty officer has recommended that I be evaluated and possibly treated by a qualified medical professional, at no cost to me, following this incident.

I understand that because I was exposed to blood or body fluids I may become seriously ill, disabled, and or could die. I understand that I could acquire Hepatitis, the Human Immunodeficiency Virus (HIV), which causes AIDS, and or other serious diseases. I understand that medical treatment should be sought within 24 hours after exposure, and that waiting longer than 48 hours may affect both the effectiveness of any medical treatment and my ability to file worker's compensation claims or insurance claims related to this incident.

Against the advice of the chief or officer, I hereby voluntarily refuse the free medical attention that has been offered to me. I release Baldwin EMS Department (Village of Baldwin) and chief or officers from any liability related to this incident, and give up any right to bring future legal action related to this incident against any person or organization.

_____ _____
Signature of employee Date

_____
EMS Chief, Duty Officer or Ryan White Officer

Back to Index ↑

Baldwin Area EMS Department

630 Highway 12, PO Box 138 • Baldwin, WI 54002 (715) 684-3188

Medicare Waiver Form

Run Number: _____-_____-_____

Patient's Name: _____ Medicare # (HICN):_____-____-_____

ADVANCE BENEFICIARY NOTICE of NONCOVERAGE (ABN)

NOTE: If Medicare doesn't pay for the ambulance services below, you may have to pay.

Medicare does not pay for everything, even some care that you or your health care provider have good reason to think you need. We expect Medicare may not pay for the ambulance services listed below.

Services:		Reason Medicare May Not Pay:	Estimated Cost:
BLS Ambulance transport and mileage	❑	Medicare does not pay for transportation from a residence or a SNF for services that could more economically be preformed at the residence or SNF.	$1295.00 BLS Amb.
	❑	Medicare does not pay for ambulance services that are not medically necessary	
	❑	Medicare does not pay for transports to a doctor's office or other non-covered destinations.	
	❑	Medicare does not pay for transports for the convenience of patient, family or physician.	
Ambulance Mileage	❑	Medicare does not pay for mileage beyond the closest appropriate facility.	$21.00 per mile
ALS Ambulance transport, scene charge and/or mileage	❑	Medicare does not pay for a higher level of service (Advanced Life Support) when a lower level of service (Basic Life Support) would suffice.	$1495.00
Air Ambulance	❑	Medicare does not pay for air ambulance service if the patient could have been by ground ambulance.	Not provided
Non-Ambulance Services	❑	Medicare does not pay for non-transporting paramedic intercept services	Starting at $495.00
	❑	Medicare does not pay for wheelchair van or stretcher car services.	not provided

What you need to do now:

- **Read this notice so you can make an informed decision about your care.**
- **Ask any questions that you may have after you finish reading this notice.**
- **Choose an option below about whether to receive the ambulance services listed above.**
  Note: If you choose Option 1 or 2, we may help you to use any other insurance that you may might have, but Medicare cannot require us to do this.

PLEASE CHOOSE *ONE* OPTION. CHECK *ONE* BOX. WE CANNOT CHOOSE A BOX FOR YOU.

❑ **OPTION 1: I want the ambulance services listed above.**
The ambulance may be asked to be paid now, but I also want Medicare billed for an official decision on payment, which is sent to me on a Medicare Summary Notice (MSN). I understand that if Medicare doesn't pay, I am responsible for payment, but I can appeal to Medicare by following the directions on the MSN. If Medicare does pay, the patient will be refunded any payments made to the ambulance, less co pays or deductibles.

❑ **OPTION 2: I want the ambulance services listed above.**
However do not bill Medicare. You may have to pay now as you are the responsible party for payment, you can not appeal if Medicare is not billed.

❑ **OPTION 3: I do not want the ambulance services listed above.**
I understand with this choice I am not responsible for payment, and I cannot appeal to see if Medicare would pay.

Additional information:
This notice gives our opinion, not an official Medicare decision. If you have any other questions on this notice or Medicare billing, call 1-800-MEDICARE (1-800-633-4227) (TTY: 1-877-486-2048)

Signing below means that you have received and understand this notice. You have also received a copy.

SIGNATURE: _____ _____ DATE: _____

Your health care information will be kept confidential. Any information we collect about you on this form will be kept confidential in our offices. If a claim is submitted to Medicare, your health care information on this form may be shared with Medicare. Your health care information, which Medicare sees, will be kept confidential by Medicare.

Back to Index ↑

Medicaid Authorization

Run Number: _____-_____-_____

Patient's Name: _____ Date: _____

Patient Waiver Form Insurance/Medicaid Authorization

There has been a change in the Medical Assistance rules and regulations requiring us to notify you when services provided or for services to be provided may not be covered by Medical Assistance.

Medical Assistance only pays for services that it determines to be reasonable and necessary. If Medical Assistance determines that a particular service is not reasonable and necessary under the Medical Assistance Program Standards, Medical Assistance will deny payment for that service.

Services must be medically necessary to be reimbursed by the Wisconsin Medical Assistance Program. (WMAP)

We believe that the services about to be provided to you by Baldwin EMS Department also known as Baldwin Ambulance Service either, all or in part, are likely to be denied for payment by the WMAP. Therefore, in the event the WMAP denies payment, you will be responsible for the payment. These services include but are not limited to:

1. Base rate
2. Mileage
3. Other: Disposable Supplies, etc.

For the following reason(s):
Not medically necessary - (state why) _____
_____.

Therefore, we are required to give you this notice advising you that in the event Medical Assistance denies payment, you will be responsible for payment. Please read the statement below and sign it.

I have been notified by the Baldwin EMS Department that they believe the Wisconsin Medical Assistance Program is likely to deny payment of the items identified above for the reasons stated. If Medical Assistance denies payment, I agree to be personally and fully responsible for payment:

Signed: _____ Date: _____

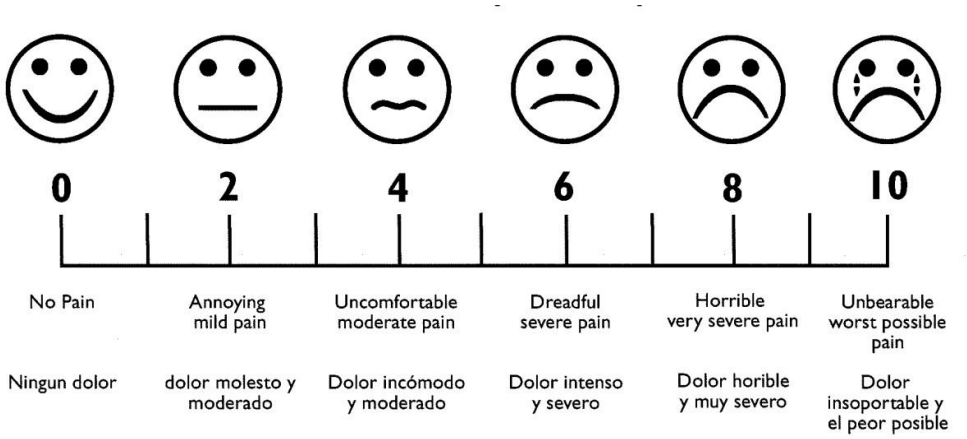
Relationship to the Patient: _____ Time: _____ AM PM

Glasgow Coma Scale

Initial and updated Glasgow Coma Scale should be given in radio report to hospital.

INFANT		CHILD/ADULT	
	EYE OPENING		
4	Spontaneously	Spontaneously	4
3	To speech	To command	3
2	To pain	To pain	2
1	No response	No response	1
	BEST VERBAL RESPONSE		
5	Coos, babbles	Oriented	5
4	Irritable cries	Confused	4
3	Cries to pain	Inappropriate words	3
2	Moans to pain	Incomprehensible sounds	2
1	No response	No response	1
	BEST MOTOR RESPONSE		
6	Normal movement	Obeys commands	6
5	Withdraws to touch	Localizes pain	5
4	Withdraws from pain	Withdraws from pain	4
3	Abnormal flexion	Abnormal flexion	3
2	Abnormal extension	Abnormal extension	2
1	No response`	No response	1

Pain Scale:



Wong-Baker Face Pain Scale

Back to Index ↑

Normal Vital Signs Guidelines for EMS
Vital signs by type

Pulse		
Descriptors: regular, irregular, strong or weak		
Adult	60 to 100 beats per minute	
Children - age 1 to 8 years	80 to 100	
Infants - age 1 to 12 months	100 to 120	
Neonates - age 1 to 28 days	120 to 160	
Blood pressure		
	Systolic	**Diastolic**
Adult	90 to 140 mmHg	60 to 90 mmHg
Children - age 1 to 8 years	80 to 110 mmHg	
Infants - age 1 to 12 months	70 to 95 mmHg	
Neonates - age 1 to 28 days	>60 mmHg	
Respirations		
Descriptors: normal, shallow, labored, noisy, Kussmaul		
Adult (normal)	12 to 20 breaths per minute	
Children - age 1 to 8 years	15 to 30	
Infants - age 1 to 12 months	25 to 50	
Neonates - age 1 to 28 days	40 to 60	

Vital signs by age

Adult vital signs	
Pulse	60 to 100 beats per minute
Blood pressure	90 to 140 mmHg (systolic) 60 to 90 mmHg (diastolic)
Respirations	12 to 20 breaths per minute
Child vital signs (age 1 to 8 years)	
Pulse	80 to 100 beats per minute
Blood pressure	80 to 110 mmHg systolic
Respirations	15 to 30 breaths per minute
Infant vital signs (age 1 to 12 months)	
Pulse	100 to 140 beats per minute
Blood pressure	70 to 95 mmHg systolic
Respirations	25 to 50 breaths per minute

Neonatal vital signs (full-term, ≤28 days)	
Pulse	120 to 160 beats per minute
Blood pressure	>60 mmHg systolic
Respirations	40 to 60 breaths per minute

Other references

Lung sounds	
Crackles or rales	crackling or rattling sounds
Wheezing	high-pitched whistling expirations
Stridor	harsh, high-pitched inspirations
Rhonchi	coarse, gravelly sounds

Pulse oximetry		
Range	**Value**	**Treatment**
Normal	95 to 100%	None
Mild hypoxia	91 to 94%	Give oxygen
Moderate hypoxia	86 to 90%	Give 100% oxygen
Severe hypoxia	≤85%	Give 100% oxygen w/ positive pressure

Apgar Scale (evaluate @ 1 and 5 minutes postpartum)			
Sign	**2**	**1**	**0**

A	Activity (muscle tone)	Active	Arms and legs flexed	Absent
P	Pulse	>100 bpm	<100 bpm	Absent
G	Grimace (reflex irritability)	Sneezes, coughs, pulls away	Grimaces	No response
A	Appearance (skin color)	Normal over entire body	Normal except extremities	Cyanotic or pale all over
R	Respirations	Good, crying	Slow, irregular	Absent

Back to Index ↑

Lab Values Chart

Electrolyte	Adult normal range
Sodium	135-148 mEq/l
Potassium	3.5-5.2 mEq/l
Chloride	95-113 mEq/l
BUN (blood Urea Nitrogen)	5-25 mg/dl
Creatinine	0.5-1.5 mg/dl
AST	5-45 IU/L
Alk Ptase	40-120 IU/L
Glucose	65-115 mg/dl
Calcium	8.5-10.3 mg/dl
Cholesterol	<200 mg/dl
LDL	62-130 mg/dl
Triglyceride	40-99 mg/dl
HDL –Male	36-75 mg/dl
HDL-Female	36-95 mg/dl
Magnesium	1.8-2.6 mg/dl
Phosphate	2.5-4.5 mg/dl
Total Bilirubin	0.1-1.5 mg/dl
Albumine	3.4-5.3 g/dl
Protein	6.0-8.0 g/dl
Uric Acid – Male	3.5-7.5
Uric Acid - Female	2.5-7.5

Cardiac

CK (Creatine Phosphokinase) –Male	35-210 IU/L
CK (Creatine Phosphokinase) –Female	10-215 IU/L
CK-MB CK isoenzyme	< 12 IU/L if total CK <400 IU/L <3.5% of total CK if total >400 IU/L
LD	90-215 IU/L
Troponin I	<1.0 ng/ml
Troponin T	<0.1 ng/ml

Hematology

WBC	4.5-11.0 x 10^3/mm^3
RBC – Male	4.32-5.72 x 10^3/mm^3
RBC – Female	3.9-5.03 x 10^3/mm^3
HGB (Hemoglobin) – Male	13.5-17.5 gm/dl
HGB (Hemoglobin) - Female	12.0-15.5 gm/dl
HGB (Hemoglobin) - Newborn	13.5-22.0 gm/dl
HCT (Hematocrit) – Male	38.8-50.0 %

HCT (Hematocrit) – Female	34.9-44.5 %

Blood Gasses

	Arterial	Venous
PH	7.35-7.45	7.32-7.42
pCO2	35-45	39-53
pO2	75-100	25-40
Bicarb	22-30 mEq/L	22-30 mEq/L
Base excess	0 +/- 2.5	0 +/- 2.5
02 Sat	92-100 %	40-70 %

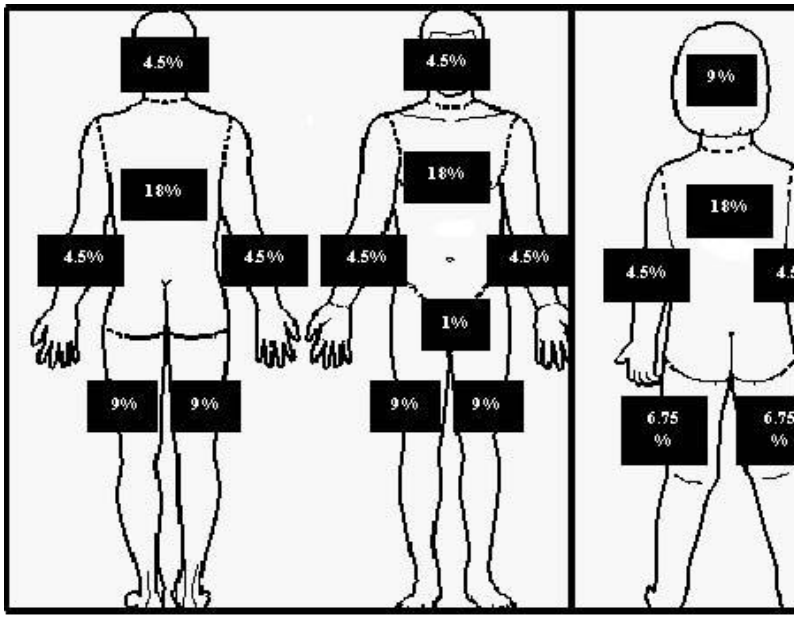
Coagulation

Protime	9-13 sec.
PTT	20-34 sec.
Thrombin Time	11-18 sec.
Fibrinogen	170-410 mg/dl
Platelets	140-440 X10^3/mm^3
Sed Rate – Male	0-15 mm/hr.
Sed Rate – Female	0-20 mm/hr.

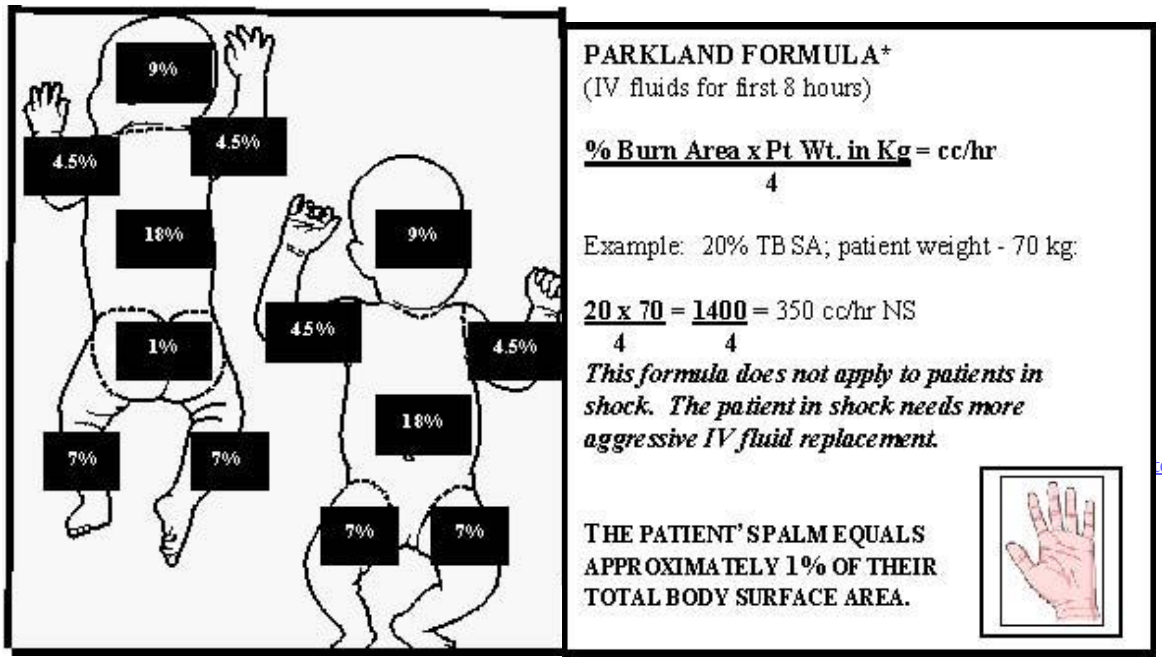
Back to Index ↑

Burns Chart – Only 2nd and 3rd Degree Burns are counted

Adult **Pediatric**



Infant



to Index ↑

Person in photo/Patient: _____

Date: _____ Time: _____

I hereby grant permission for photographs of myself / child to be taken for the purpose of documenting, evaluating, training, and treating medical conditions. Any photographs taken will become part of my medical record and maintained with the same privacy and confidentiality considerations afforded all other protected health information.

Photographs may be released to another medical facility for purposes of treatment. Photographs may also be released pursuant to a patient's signed authorization or court order. Once released those record copies will become property of and maintined in accordance with that organization's policies and procedures.

Digital images will be deleted from the EMS department's camera once prints have been made for the record.

_____
Patient or Person Authorized to Consent for Patient

_____
Witness

To be completed by Staff:

Photograph taken by: _____

Purpose of photo: _____

Number of photographs printed: _____

Distribution to faciltiy: _____

Back to Index ↑

Firefighter Rehab Log

Date: _____/_____/_____ Rehab Officer: _____

Name & Dept.	Time IN	Vitals	Comment/Treatment	Time OUT
		BP ____/____. HR		
		BP ____/____. HR		
		BP ____/____. HR		
		BP ____/____. HR		
		BP ____/____. HR		
		BP ____/____. HR		
		BP ____/____. HR		
		BP ____/____. HR		
		BP ____/____. HR		
		BP ____/____. HR		
		BP ____/____. HR		
		BP ____/____. HR		
		BP ____/____. HR		

		BP ____/____ HR		
		BP ____/____ HR		
		BP ____/____ HR		
		BP ____/____ HR		
		BP ____/____ HR		
		BP ____/____ HR		
		BP ____/____ HR		
		BP ____/____ HR		
		BP ____/____ HR		
		BP ____/____ HR		

Back to Index ↑

Event Standby Treatment Log

Type of Event: _____ Date of Event: _____

Location: _____

Time	Last Name, First Name	Injury/Complaint	Treatment Summary	Supplies Used

This log is only for treatment of minor injuries with no patient refusal form signed or transportation. May be used in MCI for green category patients not being transported.

Back to Index ↑

MRSA

MRSA stands for Methicillin Resistant S*taphylococcus aureus.* MRSA is a type of Staphylococcus bacterium that has developed resistance to the antibiotics usually used to treat the infection including methicillin, ampicillin and other penicillin's.

How do individuals get MRSA?
Individuals get MRSA the same way they get other strains of *S. aureus* that are sensitive to methicillin. The primary way individuals "get" MRSA is by contact (direct or indirect) with a person who either has a wound infection, an infection of the respiratory tract, or who is colonized with the bacteria.

Does everyone who is exposed to MRSA become infected?
No. Some individuals who are exposed to MRSA become "colonized" which means that the bacteria are present, growing and multiply without observable signs of disease. MRSA colonization occurs on the skin surface, in the nasal passage, in the sputum or in the urine. Other individuals who are exposed to MRSA never become colonized. MRSA colonization may precede or lead to infection in persons with weakened immune systems. However, persons who get MRSA infections are usually already very ill from other medical conditions.

How are MRSA infections treated?
Effective antibiotics to treat MRSA infection may include Bactrim, vancomycin and teicoplanin. Laboratory tests are usually done to determine which antibiotic will be most effective to treat MRSA infection. Only patients with symptomatic MRSA infection should be treated; MRSA colonization should usually not be treated.

How long will MRSA last?
The length of illness caused by MRSA infection depends upon the severity of the infection, the response to antibiotic therapy, and the individual's overall health. After infection has been resolved, the individual may remain intermittently or persistently colonized with MRSA and may or may not develop future infection(s).

Precautions:

1. Wear gloves when handling body fluids (urine, wound drainage, etc.), when providing care, or contacting surfaces contaminated with body fluids.
2. Disposable items soiled by body fluids (dressings, diapers, used gloves, etc.) should be placed in the trash.
3. Good cleaning with soap and water followed by a household disinfectant such as bleach is adequate to disinfect surfaces contaminated with MRSA.
4. Laundry can be done in accordance with manufacturer's directions using standard detergent.
5. Equipment, cots, etc. can be cleaned using chemicals provided at the hospital or station.

Hand washing is the most important measure, soap and water for 15 seconds minimum.

END

Back to Index ↑

Tuberculosis

What is tuberculosis?
Tuberculosis, or TB, is a disease caused by bacteria called *Mycobacterium tuberculosis*. The bacteria can attack any part of the body, but they usually attack the lungs. People who are infected with TB do not feel sick, do not have any symptoms, and cannot spread TB. But they may develop TB disease and be able to spread it sometime in the future. People with TB disease can be treated and cured if they seek medical help. Even better, people who have TB infection but are not yet sick can take medicine so that they will never develop TB disease.

How Is TB Spread?
TB disease in the lungs or throat is infectious and can be spread from one person to another through the air. The bacteria are put into the air when a person with TB disease of the lungs or throat coughs or sneezes. People nearby may breathe in these bacteria and become infected. People with TB disease are most likely to spread it to people they spend time with every day. This includes family members, friends, and co-workers. Because TB is spread through the air, people cannot get infected with TB bacteria through handshakes, sitting on toilet seats, or sharing dishes and utensils with someone who has TB. People with TB disease in the lungs or throat need to stay home from work or school so they don't spread TB bacteria to other people. After taking medicine for a few weeks, people with TB disease will feel better and no longer be infectious to others. A doctor or nurse will decide when it is safe to return to work or school. TB disease in other parts of the body, such as the kidney or spine, is usually not spread to others.

What Is TB Infection?
In most people who breathe in TB bacteria and become infected, the body is able to fight the bacteria to stop them from growing. The bacteria become inactive, but they remain alive in the body and can become active later. This is called TB infection. People with TB infection have no symptoms, don't feel sick, can't spread TB to others, usually have a positive skin test reaction, and can develop TB disease later in life if they do not receive medication. Many people who have TB infection never develop TB disease. In these people, the TB bacteria remain inactive for a lifetime without causing disease. But in other people, especially people who have weak immune systems, the bacteria become active and cause TB disease.

What Is TB Disease?
TB bacteria become active if the immune system can't stop them from growing. Some people develop TB disease soon after becoming infected, other people may get sick later. Symptoms of TB depend on where in the body the TB bacteria are growing. TB in the lungs may cause a bad cough that lasts longer than 2 weeks, pain in the chest, or coughing up blood or sputum (phlegm from deep inside the lungs). Other Symptoms of TB disease are weakness or fatigue, weight loss, no appetite, chills, fever, or sweating at night.

How Can I Get Tested for TB?
A TB skin test is the only way to find out if you have TB infection. You can get a skin test at the health department or at your doctor's office. A health care worker will inject a small amount of testing fluid (called tuberculin) just under the skin on the lower part of your arm. After 2 or 3 days, the health care worker will measure the reaction to the test. The health care worker will tell you if your reaction to the test is positive or negative. A positive reaction usually means that you have TB infection. If you have a positive reaction to the skin test, your doctor or nurse may do other tests to see if you have TB disease. These tests usually include a chest x-ray and a test of the phlegm you cough up. Because the TB bacteria may be found somewhere besides your lungs, your doctor or nurse may do other tests.

If I Have TB Infection, How Can I Keep from Developing TB Disease?
If you have TB infection (a positive skin test reaction) you can take medicine to keep from developing TB disease. The medicine kills the TB bacteria that are inactive in the body. It is important that you take all the pills prescribed for you so that your treatment is effective. People who have TB infection but do not take medicine need to know the symptoms of TB. If they develop symptoms of TB disease later on, they should see a doctor right away.

How Is TB Disease Treated?
TB disease can almost always be cured with medicine if it is taken as the doctor or nurse tells you. If you have TB disease, you will need to take several different drugs (usually isoniazid, rifampin, pyrazinamide, and ethambutol). This is because there are many bacteria to be killed. Taking several drugs will do a better job of killing all of the bacteria and preventing them from becoming resistant to the drugs. TB bacteria die very slowly. It takes 6 months (sometimes longer) for the medicine to kill all the TB bacteria. You will probably start feeling well after only a few weeks of treatment, but the TB bacteria are still alive in your body. You must continue to take your medicine until all the TB bacteria are dead, even though you may feel better and have no more symptoms of TB disease

END

Back to Index
↑

DEPARMENT OF HEALTH & FAMILY SERVICES
Division of Public Health
DPH 7489 (04/08)
1568

STATE OF WISCONSIN
Chapter HF110 Wis. Admin. Code
(608) 266-

EMERGENCY MEDICAL SERVICES (EMS)
PATIENT CARE WORKSHEET

This form is for use by ambulance service providers who are unable to immediately comply with chapters HFS 100, 111, 112 and 113, Wis. Admin. Code as they apply to documentation of ambulance runs by completing and providing patient care information to the receiving facility when the patient is delivered to the facility. Per the above administrative rules, this form becomes part of the patient's medical record.

INSTRUCTIONS: Print legibly. Complete all sections of this worksheet. A copy of this worksheet or the ambulance run report must be completed and left with the receiving facility when a patient is delivered. **This form does not constitute the official run report / patient care report.**

Ambulance Service: Baldwin Area EMS (715) 684-3188 or email: BaldwinEMS@baldwin-telecom.net **Run #:** _____

Incident Date: _____ **Incident Location:** _____

Patient Name: _____ **Sex:** ❑ Male ❑ Female **Weight:** _____ lbs.

Patient Address: _____ **DOB** _____/_____/_____ **Age** _____

City/State/Zip:_____

Chief Complaint: _____

NOI/MOI: _____.

GCS: Eyes 4-1 _____ Speech 5-1 _____ Motor 6-1 _____ **Total** _____

LOC: Alert x ❑ 1 ❑ 2 ❑ 3 ❑ Respond to verbal ❑ Respond to pain ❑ Unresponsive

TIMES: Enroute:_____ Scene:_____ Patient:_____ Left:_____ Arrived:_____

Time	B/P	Pulse	Respiratory	Oximetry	Glucometer	EKG	Treatment and Response
	/						
	/						
	/						
	/						
	/						
	/						

	/						

Skin: ❑Cyanotic ❑Pale ❑Flush ❑Normal ❑Hot ❑Warm ❑Cool ❑Moist ❑Diaphoretic ❑Dehydrated/Dry

Eyes: ❑ PERRL ❑ Constricted ❑ Dilated ❑ Non-Reactive **Lungs:** ❑ Clear/Equal ❑ _____

O2 Given: ❑ Yes ❑ No **Rate of flow:** _____ via ❑ Mask ❑ cannula ❑ BVM

Allergies: ❑ NKA ❑ Denies ❑ PCN ❑ Sulfa ❑ Codeine ❑ Latex ❑ Morphine ❑ ASA Other: _____

Medications: ❑ Denies ❑ ASA ❑ Albuterol ❑ Furosemide ❑ Lanoxin (digoxin) ❑ Oral Contraceptive
Other:

Past Medical History: ❑ Denies ❑ Cardiac ❑ CHF ❑ Hypertension ❑ Seizure ❑ Diabetes ❑ COPD ❑ Asthma ❑ Bleeding Disorders ❑ Seizures ❑ CVA/TIA ❑ Other:

Last Oral Intake: _____ **Events:** _____
_____.

CPR: ❑ Yes ❑ No Time Started: _____ **Defib/Shock:** ❑ Yes ❑ No **Airway:** ET King Combitube

Return of Pulse? ❑ Yes ❑ No Rate _____ Return of Respirations? ❑ Yes ❑ No Rate _____

Crew Members: _____ _____ _____ _____

Fax Numbers: Regions 651-254-6973 • North 763-257-0071 • HCMC 612-904-4242 • United 651-241-5398 • Children's (United) 651-220-6999

END (Form sized to fit page)

Back to Index ↑

Inter-facility Transfer Form

Date: _____/_____/20_____ Lead EMT/Paramedic:_____

Facility from:

❑Baldwin Area Medical Center Time arrived: ____:_____ Time departed: ____:_____
❑Other: _____ Physician Ordering Transfer: Dr. _____

Patient Demographics:

Name: _____ Age: _____ DOB: _____/_____/_____

Transfer To:

Hospital: _____ Physician Accepting: Dr. _____

Address: _____ City/State: _____ Phone: _____-_____-_____

Chief Complaint/Diagnose/Reason for Transfer:

PMH:

Allergies:

Medications:

Labs/Diagnostics:

Patient Report @ departure:

B/P					**Initial Rhythm:**		
HR					**Ectopy:**		
Resp					**12 lead:**		
SPO2							
Temp					**O2 enroute:**		
Pain					**NG/Foley?:**		
A/O							

IV INFUSIONS:

IV MEDICATION & Concentration:	Units/Hr.	mL/Hr.	Amt. infused by Hospital

Advanced Airway:

ET Tube size:	mm at teeth:	
Induction Drugs:		
Maintenance Sedation:		
Vent RPM:	Vent Tidal Volume:	Vent o2 Percentage:

Paperwork Must Be Complete and Collected before Transport:

❑ Physician Certification Statement PCS (Correct & Complete) ❑ Hospital Face Sheet with Insurance Information
❑ Medicare "ABN" form was explained, completed, and signed. ❑ Medicaid form was explained, completed, and signed.

Baldwin EMS, When Transfer is completed: Please call BAMC at 684-3311 to report on the patient condition during transfer.

Nurse or UC called: Name_____ Time ____:____

END

Back to Index ↑

ADULT Rapid Sequence Induction

WEIGHT		SEDATION		SHORT-TERM PARALYTIC	LONG-TERM PARALYTIC	
Weight (#)	Weight (kg)	ETOMIDATE 0.3mg/kg	KETAMINE 3mg/kg	SUCCINYLCHOLINE 2mg/kg	VECURONIUM 0.1mg/kg	ROCURONIUM 1mg/kg
50 #	23 kg	7 mg	68 mg	45 mg	2 mg	23 mg
60 #	27 kg	8 mg	82 mg	55 mg	3 mg	27 mg
70 #	32 kg	10 mg	95 mg	64 mg	3 mg	32 mg
80 #	36 kg	11 mg	109 mg	73 mg	4 mg	36 mg
90 #	41 kg	12 mg	123 mg	82 mg	4 mg	41 mg
100 #	45 kg	14 mg	136 mg	91 mg	5 mg	45 mg
120 #	55 kg	16 mg	164 mg	109 mg	5 mg	55 mg
140 #	64 kg	19 mg	191 mg	127 mg	6 mg	64 mg
160 #	73 kg	22 mg	218 mg	145 mg	7 mg	73 mg
180 #	82 kg	25 mg	245 mg	164 mg	8 mg	82 mg
200 #	91 kg	27 mg	273 mg	182 mg	9 mg	91 mg
220 #	100 kg	30 mg	300 mg	200 mg	10 mg	100 mg
240 #	109 kg	33 mg	327 mg	218 mg	11 mg	109 mg
260 #	118 kg	35 mg	355 mg	236 mg	12 mg	118 mg
280 #	127 kg	38 mg	382 mg	255 mg	13 mg	127 mg
300 #	136 kg	41 mg	409 mg	273 mg	14 mg	136 mg
320 #	145 kg	44 mg	436 mg	291 mg	15 mg	145 mg
340 #	155 kg	46 mg	464 mg	309 mg	15 mg	155 mg
360 #	164 kg	49 mg	491 mg	327 mg	16 mg	164 mg
380 #	173 kg	52 mg	518 mg	345 mg	17 mg	173 mg
400 #	182 kg	55 mg	545 mg	364 mg	18 mg	182 mg

⍟PEDIATRIC Rapid Sequence Induction

WEIGHT		PREMEDICATION	SEDATION	SHORT-TERM PARALYTIC	LONG-TERM PARALYTIC	
Weight (#)	Weight (kg)	ATROPINE (If < 7yo) Dose: 0.02mg/kg (min 0.1mg, max 0.5mg)	ETOMIDATE 0.3mg/kg	SUCCINYLCHOLINE 2mg/kg	VECURONIUM 0.1mg/kg	ROCURONIUM 1mg/kg
5 #	2.3 kg	0.1 mg	0.7 mg	4.5 mg	0.2 mg	2.3 mg
10 #	4.5 kg	0.1 mg	1.4 mg	9.1 mg	0.5 mg	4.5 mg
15 #	6.8 kg	0.1 mg	2 mg	13.6 mg	0.7 mg	6.8 mg
20 #	9.1 kg	0.2 mg	2.7 mg	18.2 mg	0.9 mg	9.1 mg
25 #	11.4 kg	0.2 mg	3.4 mg	22.7 mg	1.1 mg	11.4 mg
30 #	13.6 kg	0.3 mg	4.1 mg	27.3 mg	1.4 mg	13.6 mg
35 #	15.9 kg	0.3 mg	4.8 mg	31.8 mg	1.6 mg	15.9 mg
40 #	18.2 kg	0.4 mg	5.5 mg	36.4 mg	1.8 mg	18.2 mg
45 #	20.5 kg	0.4 mg	6.1 mg	40.9 mg	2 mg	20.5 mg
50 #	22.7 kg	0.5 mg	6.8 mg	45.5 mg	2.3 mg	22.7 mg
60 #	27.3 kg	0.5 mg	8.2 mg	54.5 mg	2.7 mg	27.3 mg
70 #	31.8 kg	0.5 mg	9.5 mg	63.6 mg	3.2 mg	31.8 mg
80 #	36.4 kg	0.5 mg	10.9 mg	72.7 mg	3.6 mg	36.4 mg
90 #	40.9 kg	0.5 mg	12.3 mg	81.8 mg	4.1 mg	40.9 mg
100 #	45.5 kg	0.5 mg	13.6 mg	90.9 mg	4.5 mg	45.5 mg

Informed Consent and Release for Ride – Along

I hereby consent to participate in the ride-along program offered at Baldwin Area EMS. I understand that the purpose of this program is to observe the role of the Emergency Medical Services professionals in their daily work environment and I do so voluntarily.

RISKS:

I understand that I will be riding in an emergency vehicle with Baldwin Area Emergency Medical Service staff as they respond to requests for emergency medical services. I further understand that in responding to such request, I may be exposed to conditions and situations that are dangerous and traumatic. Such conditions or situations may include, but are not limited to: exposure to communicable diseases transmitted through exposure to blood, bodily fluids, airborne pathogens, hazardous materials and chemicals; risk of physical harm as a result of the combative patient. I acknowledge there is a risk of emotional harm that may accompany my exposure to graphic and traumatic scenes that may include significant injuries, illness, or death. I also acknowledge that I may be exposed to risks that cannot be anticipated. It is my understanding that Baldwin Area Emergency Medical Service staff's obligation is to render care and treatment to the patient and therefore the Emergency Medical Service staff may not be able to protect me from the various risks to which I may be exposed.

Release:

I acknowledge that there are risks involved in my participation in this program. I hereby agree to hold harmless Baldwin Area Emergency Medical Service, the Village of Baldwin, Baldwin Area Emergency Medical Service's affiliates, and it's Medical Directors from any claim, damage, illness, or loss that I may experience, including physical and emotional injury as a result of my participation in this program.

Confidentiality:

I acknowledge that during my participation in this program I may become aware of facts relating to a specific patient's identity and private information, including the patient's diagnosis, treatment, and complaints. Furthermore, I fully understand that the patient's identity and all the facts relating to the care and treatment to any patient are strictly confidential, both ethically and legally. I understand that at no time can any such information be discussed even after I terminate my participation in the program.

- ✓ Remember to wear the appropriate clinical uniform *(Gray or white shirt with navy EMT/EMS pants and leather boots or shoes)*
- ✓ Upon arrival here, you will meet your preceptor for the day.
- ✓ You will be given a brief orientation of the building, ambulances and equipment you will be using for the shift.
- ✓ Please let your preceptor know what EMT level you are training for.
- ✓ You should show up promptly for your scheduled clinical time. Allowed times to ride are from **8am to 12pm**.
- ✓ We have areas where you can study, please feel free to bring your books.
- ✓ For your convenience, we have a kitchen area to prepare food if you would like. We just ask that you please clean up after yourself.
- ✓ Please bring food with you for the day, or have money with in case you stop with the crew after returning from a call.
- ✓ Since this is a learning experience, you might be asked to assist with the department's daily duties that will enhance your learning of the EMS profession.

If at anytime you have any questions, or if for you cannot make your scheduled shift, please feel free to contact our on call Paramedic Duty Officer at (715) 760-1491 or the Chief at (715) 760-1293.

We are looking forward to working with you to expand your EMS knowledge and experience!

Sincerely,
Thomas Boyer NREMT-P
EMS Chief
Baldwin Area EMS

Signature of Participant _____ Date _____

Printed Name _____

_____ _____

Signature of Chief or Designee Date

_____

Printed Name

Informed Consent and Release for Ride – Alongs

Contact Information:

Name: _____
Phone number: (___)_____

Emergency Information:

Date of birth: __/___/_____
Known medical problems: _____
Allergies: _____

Emergency Contact Information:

Primary Contact
Name: _____
Relationship: _____
Primary Phone Number: _____
Secondary Phone Number: _____

Secondary Contact
Name: _____
Relationship: _____
Primary Phone Number: _____
Secondary Phone Number: _____

Emergency Phone Numbers

Twin Cities ED's	ED Phone	ED Fax	Address
Regions Level	651-254-3307	651-254-6973	640 Jackson St - St. Paul, MN
North Memorial	763-520-5542	763-257-0071	3300 Oakdale Ave N. - Robbinsdale, MN 55442
Hennepin Cty Med Ctr.	612-873-3132	612-904-4242	701 Park Avenue - Minneapolis, MN 55415
Woodwinds (Woodbury)	651-232-0020	651-232-0620	1925 Woodwinds Drive - Woodbury, MN 55126
St. John's ER	651-232-7073	651-232-6665	1575 Beam Avenue - Maplewood, MN 55109
St. Joseph's	651-232-3108	651-232-3539	45 West 10th Street - St. Paul, MN 55102
United Hospital ED	651-241-8755	651-241-5398	333 North Smith Avenue - St. Paul, MN 55102

Stemi Batphone	***866-228-3663***	*(call with inbound patients from field with acute St Elevation)*	
Abbott Northwestern Hospital	612-863-4233	612-863-5342	800 East 28th Street - Minneapolis, MN 55407
Lakeview Hospital – Stillwater	651-430-4554651-430-4546927 Churchill Street West - Stillwater, MN 55082		
U of MN Med. Ctr. Fairview	612-273-2700	612-273-2910	500 Harvard St. - Minneapolis, MN 55455
U of MN Med Ctr. Riverside	612-273-6402	612-273-0169	2450 Riverside Ave. - Minneapolis, MN 55454
St. Paul Children's ER	651-220-6911	651-220-6999	(at United)
Regina ER (Hastings)	651-480-4310		
Emergency Numbers			
MRCC – East Metro	**651-254-2990**		
West Metro MRCC	612-347-2123		
Poison Control	**800-222-1222**		
CHEMTREC	800-424-9300	*(all chemical emergencies, MSDS, treatment, HazMat responses)*	
MN State Duty Officer	800-422-0798		
Wisconsin ED's	**ER Direct**	**Hospital Main**	**ER Fax**
Amery	715-268-0460		715-268-0461
Baldwin ER Direct	**715-684-6788**	**715-684-3311**	715-684-3715 (outpatient)
2nd floor Chg. Nurse	715-684-6728		715-684-8618 (2nd floor Nurse Station)
Barron Memorial	715-537-3186		
Cumberland Memorial	715-822-6132		
Westfields (New Richmond)	715-243-2873	715-243-2600	715-243-2701
Hudson -ER	715-531-6573		715-531-6580
Menomonie - Mayo	715-233-7292		715-233-7715
River Falls ER Nurse	715-307-6161	715-307-6150	
St. Croix Falls Regional Med Ctr	715-483-0555		715-483-0259
Eau Claire Sacred Heart	715-717-4222		
Eau Claire Luther Mayo	715-838-3242		715-838-3507
Chippewa Falls St. Josephs	715-723-1811		
WI Emergency Numbers			
St. Croix Dispatch	**715-684-2112** or 715-386-4701		
Emergency Road Information	511 from a 715 number		
WEM Duty Officer	800-943-0003		
Pierce County Dispatch	715-273-5051		
Polk County Dispatch	715-485-8300		
Helicopter Services			
Mayo 1 Eau Claire	800-237-6822		
LifeLink III	**800-328-1377**		
North Air Care	800-328-7830		

Baldwin Area EMS				Station 715-684-3188 – fax: 684-4575
5601	715-760-1207	Duty Officer	715-760-1491	
5602	715-760-1331	Chief Nelson	715-760-1293	
5603	715-760-1333	Asst. Chief Wittmer	715-760-1299	
5604	715-760-2704	Asst. Chief Fadoir	715-760-1011	
United Fire				
Baldwin	715-6842954	Fax	715-684-5429	
Hammond	715-796-2480	Fax	715-796-2420	
Woodville	715-698-2222	Fax	715-698-2551	
Roberts-Warren Rescue	715-749-3425			

Duty Officer/On Duty Medic			
River Falls – Medic 6 (Primary)	715-821-6506	Medic 7 (Backup) 715-821-6507	Station 715-425-0370
St. Croix – Hudson Medic 81	715-760-2453	104*21*5072	Station 715-386-4778
New Richmond	715-760-0893		Station 715-246-7700

Concealed Weapon - chain of custody form

Patient Name: _____ Date of service: _____

Weapon type:
() firearm () cutting blade () taser device

Describe/Number: _____

Weapon Secured by:
() Baldwin PD () Hammond PD () Woodville PD () St. Croix Sheriff Office

Officer name or number: _____

Was there proof of CCW permit: () Yes () No

EMS to Hospital transfer of weapon:

Hospital: () BAMC () Hudson () New Richmond () River Falls
() Other: _____

Given by: Printed Name: _____

Signature: _____

Received by: Printed Name: _____

Signature: _____

Time: _____ Date: _____

Release of weapon to patient:

Given by: Printed Name: _____

Signature: _____

Received by: Printed Name: _____

Signature: _____

Time: _____ Date: _____

END

Back to Index ↑