

Peoria Area EMS

Pre Hospital Care

Protocol Manual



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Medical Director

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	Peoria Area EMS System Prehospital Care Manual		Page
Effective Oct 1, 2021			2

FOREWORD

The format of the Peoria Area EMS System (PAEMS System) Prehospital care manuals has changed several times throughout the history of the System. The initial protocol manual (June 1983) consisted of ALS field treatment protocols. Changes in IDPH rules and regulations resulted in the addition of ILS protocols (July 1990), BLS protocols (November 1992) and First Responder protocols (April 1998). In 1994 the PAEMS System Policy Manual was developed to address medical-legal issues and concerns and, in 1995, procedures were formatted into a Standard Operating Procedure Manual.

With the complexity of a tiered response system and with the growing demand that health care services are both effective and efficient, the format for providing medical direction and patient care guidelines changed again in 2002. The separate manuals outlining field treatment guidelines, policies and procedures were all combined into one manual, the *Prehospital Care Manual*. This manual has become the focal point for patient care for Peoria Area EMS System providers in the Prehospital setting.

This 2020 edition has dramatic changes made to the protocols to reflect changing national evidence-based trends in an effort to provide optimal patient care.

All information contained herein is intended for use within the Peoria Area EMS System. No other system’s protocols, policies, or procedures shall supersede the guidelines set forth in this manual or be utilized in place of this manual by a provider in the Peoria Area EMS System without the approval of the Peoria Area EMS System Medical Director.


From the EMS Medical Director

The mission of the Peoria Area EMS System is to deliver the highest quality health care that can be achieved with available resources. A uniform application of the protocols will ensure that competent and efficient care is provided to our patients. Our mission is accomplished by pursuing the goals of providing strong prehospital education and training. The protocols will help resolve potential problems that may jeopardize the health and safety of the patient, prehospital healthcare provider or the community.

As your EMS Medical Director, I welcome your input and encourage your suggestions by promoting an “open door” atmosphere. The EMS Office is a resource to assist you in accomplishing the mission of providing emergency medical services to your community. Please do not hesitate to contact us if we may be of any assistance to you or your agency.

It is my sincere wish that your experience with and service to the Peoria Area EMS System is both enjoyable and rewarding for you.

Respectfully,
 Matt Jackson, MD
 EMS Medical Director
 Peoria Area EMS System

	Peoria Area EMS System Prehospital Care Manual		Page
Effective Oct 1, 2021	Glossary of Terms		3

Glossary of terms that may help your understanding of specific protocols

Stable Patient-A patient is considered stable if they are alert & oriented, with pink warm & dry skin, present peripheral pulses, and adequate respirations.

Unstable Patient-A patient is considered unstable if they have one or more of the above criteria lacking, severe chest pain or discomfort, or altered level of consciousness, with signs or symptoms of hypo perfusion.

AHA Guidelines-Current recommended policies and/or procedures from American Heart Assoc. for BLS, ACLS, and/or PALS. PAEMS does not authorize the use of all AHA recommended medications. Check medication list for specific available medications.

ALS-Advanced Life Support level of care typically at the Paramedic and PHRN levels

BIAD-Blind Insertion Airway Device which PAEMS authorizes the use of an Igel

BLS-Basic Life Support level of care typically at the EMT or EMT-B level

BSI/ PPE-Standard on every call- non latex gloves, eye protection, surgical mask. Additionally gowns, face protection, N95's, head and feet protection, based upon patient presentation. It is required that there be a minimum of 2 sets per provider per call. Each agency should perform a N95 fit test yearly or whenever a provider requires.

Cushing's Response-A sign of increasing ICP (Intra Cranial Pressure)-decreasing pulse rate, increasing BP, and irregular or abnormal respirations

The Department-An abbreviated way of referencing IDPH

EMS Act-(515) <http://www.ilga.gov/commission/jcar/admincode/077/07700515sections.html>

EMS Provider-Any provider at any level from EMR-EMT-I-P-PHRN

Extravasation: An infiltration or leaking from an IV/IO site into the extravascular tissues

ILS-Intermediate Life Support level of care typically at the EMT-I or Intermediate level

Medications-Medications authorized by PAEMS protocols from the date of protocol introduction. This is subject to change based upon med availability along with policy and protocol changes.

Policy-A defined rule or regulation of the system

Procedure-A step by step direction to perform a specific task

Shock-Signs or symptoms of hypo perfusion are present in your patient.

SMO-Standing Medical Order from the Medical Director-no online contact necessary

SOP-Standard Operating Procedure

System-An abbreviated way of saying Peoria Area EMS System

Trauma Guidelines-Current recommended policies and/or procedures from ITLS and/ or PHTLS.

TWIAGE-A secure HIPAA compliant app that can be downloaded on any device to communicate with local ED's. See your agency for access.

Volume and Mass abbreviations:

mcg	mg	ml	mEq	kg	l	g
Microgram	Milligram	Milliliter	Millequivalent	kilogram	Liter	Gram


	Peoria Area EMS System Prehospital Care Manual	Page
Effective Oct 1, 2021	Table of Contents	4

Table of Contents

Click any heading below to jump to each respective section

Foreward2

Table of Contents.....4

Peoria Area EMS Policy Section

Policies 8

Levels of Prehospital Care..... 9

Agency Responsibilities..... 10

Professional Conduct and Agency Code of Ethics..... 11

Agency Compliance Waiver/ HIPAA..... 12

Communications and Patient Care Report Policy 13

System Certification/ Relicensure Policy 15

Patient Right of Refusal and Destination Policy..... 18

Transfer of Care Policy 20

Intercept/ In Field Service Level Upgrade Policy 21

Incident Reporting Policy 22

Termination of Resuscitation (DNR) Policy 23

Withholding Resuscitation/ Notification of the Coroner/ Crime Scene Policy..... 25

Petitioning an Emotionally Disturbed Patient/ Physical and Chemical Restraints Policy and Procedure 27

On Scene Intervening Physician or other Medical Professional Policy..... 29

Concealed Weapons Policy 30

Infectious Disease Exposure Policy 31

Substance Abuse Policy..... 33

ALS Controlled Substances Policy 35

Medical Disaster and System Wide Crisis Policy 38

Suspected Human Trafficking Policy..... 39

Domestic and Elder Abuse Policy..... 40

Rape/ Sexual Assault Policy 41

Critical Incident Stress Management Policy..... 42

Region 2 School Bus Accident Policy..... 43

12 Lead Policy	45
Peoria Area EMS Procedures Section	
Procedures	46
Pain Control Procedure.....	47
Pain Control Dosing Chart.....	49
Basic Airway Control Procedure	51
Advanced Airway Control Procedure.....	54
Advanced Airway Expanded Scope Only.....	56
Bougie/ OG Tube Procedure	60
Intraosseous/ Jamshidi Procedure.....	61
Central Lines and Fistulas Procedure.....	63
Medication Administration Procedure	64
Universal Patient Care Procedure.....	65
Universal Trauma Patient Care Procedure	67
Spinal Assessment and Clearance Procedure	70
Field Triage Scheme Procedure	71
Tourniquet Procedure.....	72
Needle Thoracentesis Procedure.....	73
Push Dose Epi Procedure	74
Immunization Administration Procedure	75
START and JUMP START Triage Procedure	76
Peoria Area EMS Medical Protocol Section	
Adult Medical Protocols	78
Universal Cardiac Care Protocol.....	79
Cardiogenic Shock Protocol	81
Cardiac Arrest Protocol.....	83
Pulseless Rhythms Protocol	85
Unstable Bradycardia Protocol	87
Narrow Complex Tachycardia.....	89
Wide Complex Tachycardia.....	91
AICD Automated Implanted Defibrillator	93
Suspected Stroke Protocol.....	94
Respiratory Distress Protocol.....	95
Altered level of Consciousness Protocol.....	98
Seizure Protocol	100
Acute Abdominal Pain Protocol	101

Acute Nausea & Vomiting Pain Protocol	102
Septic Shock Protocol.....	103
Anaphylaxis Protocol.....	104

Peoria Area EMS Adult Trauma Protocol Section

Adult Trauma Protocols	105
Traumatic Shock Protocol	106
Burn Protocol	107
Crush Syndrome Protocol	109
EMR Care, BLS Care, ILS Care, ALS Care	109
Hazardous Materials Protocol.....	110
Heat and Cold Emergencies Protocol	111
Near Drowning Protocol	112
TXA-Tranexamic Acid Protocol.....	113
Head and Spinal Trauma Protocol	114
Extremity Trauma Protocol.....	117
Drug Overdose/ Poisoning Protocol	119
Excited Delirium Protocol	120
Less than Lethal Weapons Protocol.....	122
Teargas / Oleoresin Capsicum (Pepper Spray) Exposure	122
Taser-Related Injuries	123
OB/ Childbirth Protocol.....	124


Peoria Area EMS Pediatrics Protocol Section

Pediatric Protocols	129
Pediatric Assessment	130
Pediatric Assessment Triangle (PAT).....	130
<i>Work of Breathing</i>	131
<i>Circulation to Skin</i>	132
<i>Putting it all Together</i>	132
Pediatric Assessment	134
Routine Pediatric Care	137
Pediatric Pulseless Rhythms Protocol	138
Pediatric Bradycardia.....	139
Pediatric Tachycardia.....	140
Pediatric Respiratory Distress Protocol	141
Pediatric ALOC Protocol.....	143

Pediatric Seizure Protocol	144
Pediatric Anaphylaxis Protocol	146
Pediatric OD, Toxic Exposure Protocol.....	147
Pediatric Pain Protocol.....	148
Routine Pediatric Trauma Care	149
EMR Care, BLS Care, ILS Care, ALS Care	149
Pediatric Glasgow Coma Scale	152
Suspected Child Maltreatment	153
EMR Care, BLS Care, ILS Care, ALS Care	153
Suspected SIDS.....	154
EMR Care, BLS Care, ILS Care, ALS Care	154

Peoria Area EMS Supplies Section

Supplies.....	155
PAEMS Supply Policy.....	156
PAEMS Medications	157
Equipment and Supplies	160
Equipment and Supplies	161
ILS Additional Supplies	162
ALS Ambulance Supplies	163
Equipment and Supplies	164
PAEMS Supplies	165
ILS Additional Supplies	166
ALS Ambulance Supplies	167

	Peoria Area EMS System Prehospital Care Manual	Policies Section	Page
Effective Oct 1, 2021	Policies Section - Levels of Prehospital Care		8

[Resource Hospital](#)

OSF Saint Francis Medical Center

**530 Northeast Glen Oak Avenue
Peoria, Illinois 61637**

MEDCOM 309-655-2564
 Medical Control 309-655-6770
 Emergency Department 309-655-2109
 Regional Service 800-252-5433

Comprehensive Medical Center

**EMS Medical Control
 Level 1 Trauma Center
 Pediatric Hospital
 Disaster Medical Services RMERT**

[Participating Hospitals](#)

UnityPoint Health – Methodist

**221 Northeast Glen Oak Avenue
Peoria, Illinois 61636**

Medical Center 309-672-5522
 Emergency Department 309-672-5500

Unity Point Health Pekin Hospital

**600 S. 13th St
Pekin, IL 61554**

Hospital Services 309-347-1151
 Emergency Department 309-353-0530

UnityPoint Health – Proctor

**5409 North Knoxville Avenue
Peoria, Illinois 61614**

Hospital Services 309-691-1000
 Emergency Department 309-691-1069

Graham Hospital


**210 West Walnut Avenue
Canton, Illinois 61520**

Hospital Services 309-647-5240

Hopedale Medical Complex

**107 Tremont Street
Hopedale, Illinois 61747**

Hospital Services 309-449-3321
 Emergency Department 309-449-4490

	Peoria Area EMS System Prehospital Care Manual	Policies Section	Page
Effective Oct 1, 2021	Levels of Prehospital Care		9

1. A currently licensed **EMR, EMT, Intermediate, Paramedic, or PHRN** may perform emergency and non-emergency medical services as defined in the EMS Act and in accordance with his or her level of education, training and licensure. Prehospital personnel must uphold the standards of performance and conduct prescribed by IDPH in rules adopted pursuant to the Act and the requirements of the EMS System in which he or she practices, as contained in the approved System Program Plan.
2. A person currently licensed as an **EMT, Intermediate, or Paramedic** may only use their EMS license in prehospital/inter-hospital emergency care settings or non-emergency medical transport situations under the written directions of the EMS Medical Director.
3. **Emergency Medical Responder (EMR): Commonly called First Responder:** Provides care consistent with the definition of an EMR service and within the context of Standing Medical Orders (SMOs) or Standard Operating Procedures (SOPs). First Responder care should be focused on assessing the situation and establishing initial care.
 First Responders who provide medical care in the Peoria Area EMS System must be trained in the use of an AED and hold a *First Responder/Defibrillator (FR-D)* recognition card from the Illinois Department of Public Health (IDPH).
4. **Emergency Medical Technician (EMT):** Provides care consistent with the definition of a BLS service and within the context of SMOs or SOPs. This may include interventions involving airway access and maintenance, ventilatory support, oxygen delivery, bleeding control, spinal immobilization and splinting isolated fractures. EMT attention is directed at conducting a thorough patient assessment, providing appropriate care and preparing or providing patient transportation. In addition, EMTs may assist the patient in self-administering prescribed Nitroglycerin (NTG), Proventil (Albuterol) or an Epi-Pen pending an ALS response. EMTs who are System-certified and functioning with an approved BLS-Med agency may carry and administer various approved medications and procedures.
 AEDs are required on BLS licensed vehicles officially incorporated into the EMS System Plan.
5. **Intermediate (EMT-I):** Provides care consistent with the definition of an ILS provider and within the context of SMOs or SOPs. This may include all BLS skills, along with System-approved interventions and administration of System-approved medications. EMT-Intermediate attention is directed at conducting a thorough patient assessment, providing appropriate care and preparing or providing patient transportation.
6. **Paramedic (EMT-P):** Provides care consistent with the definition of an ALS service and within the context of SMOs or SOPs. This includes all BLS and ILS skills, along with System-approved interventions and advanced life support medications. The patient's condition and chief complaint determine the necessity and extent of ALS care rendered. Consideration should be given to the proximity of the receiving hospital. The Paramedic level may be enhanced to include selected critical care medications and skills for inter-facility transfers.
7. **Prehospital RN (PHRN):** The Illinois EMS Act (1995) defines a PHRN as "a registered professional nurse licensed under the Illinois Nursing Act of 1987 who has successfully completed supplemental education in accordance with rules adopted by the Department (IDPH) pursuant to the Act, and who is approved by an EMS Medical Director to practice within an EMS System as emergency medical services personnel for Prehospital and inter-hospital emergency care and non-emergency medical transports".

NOTE: Pre Hospital Providers and their agency are responsible for tracking their expiration dates and providing updated copies of their licenses to their agency and to the PAEMS Office. If the appropriate documentation is not on file with the PAEMS Office the provider will not be allowed to function within the Peoria Area EMS System.

	Peoria Area EMS System Prehospital Care Manual	Policies Section	Page
Effective Oct 1, 2021	Agency Responsibilities		10

Listed below is a summary of the important responsibilities of the provider agencies that are in the Peoria Area EMS System. This list is based on the System manuals and IDPH 515 rules and regulations. Illinois administrative code Title 77 Part 515 also known as the 515 codes may be found online at

<http://www.ilga.gov/commission/icar/admincode/077/07700515sections.html>

1. A provider agency must comply with minimum staffing requirements for the level and type of vehicle. Staffing patterns must be in accordance with the provider's approved system plan and in compliance with Section 515.830(f).
2. No agency shall employ or permit any member or employee to perform services for which he or she is not licensed, certified or otherwise authorized to perform (Section 515.170).
3. Agencies that utilize EMR's and Emergency Medical Dispatchers shall cooperate with the System and the Department in developing and implementing the program (Section 515.170).
4. A provider agency must comply with the Ambulance Report Form Requirements Policy, including Prehospital patient care reports, refusal forms and any other required documentation.
5. Agencies with controlled substances must abide by all provisions of the Controlled Substance Policy including: *maintaining a security log, maintaining a Controlled Substance Usage Form and reporting any discrepancies to the EMS Office-see PAEMS.org for forms.*
6. Notify the EMS Office of any incident or unusual occurrence which could or did adversely affect the patient, co-worker or the System **within 24 hours** via incident report form found on PAEMS.org.

An agency participating as an EMS provider in the Peoria Area EMS System must notify the Resource Hospital, OSF Saint Francis Medical Center, of the following:

1. Notify the System in **any** instance when the agency lacks the appropriately licensed and System-certified personnel to provide 24-hour coverage. Transporting agencies must apply for an ambulance staffing waiver if the agency is aware a staffing shortage is interfering with the ability to provide such coverage.
2. Notify the System of agency personnel changes and updates **within 10 days**. This includes addition of new personnel and resignations of existing personnel.
3. Notify the System anytime an agency is not able to respond to an emergency call due to lack of staffing. The report should also include the name of the agency that was called for mutual aid and responded to the call.
4. Notify the System of **any** incident, via incident report (found on PAEMS.org) within 24 hours, which could or did adversely affect the patient, co-worker or the System.
5. Provide the System with updated copies of FCC Licenses and Mutual Aid Agreements upon expiration.
6. Notify the System of any changes in vehicles (including temporary replacement). Vehicles must be inspected by the System and the appropriate paperwork must be completed **prior** to the vehicle being placed into service.
7. Notify the System if the agency's role changes in providing EMS and/ or response area changes.

Each agency shall appoint a training officer. This EMS training officer must be an IDPH Lead Instructor. The training officer (or approved designee) will be required to attend mandatory training officer in-services at the PAEMS office. This training officer must develop a training plan which meets the requirements for re-licensure and System certification as detailed in the *Continuing Education and Re-licensure Requirements Policy* and submit the agency's training plan (along with a current roster) annually to the EMS Office for System and Department (IDPH) approval. The applications are due by October 1st for the following training year.

All agencies must comply with the Peoria Area EMS System Quality Assurance Plan, including agency self-review, submission of incident reports, and submission of patient care reports or provide electronic access to the agencies charts, maintain controlled substance security logs, glucometer logs, and usage tracking forms.

	Peoria Area EMS System Prehospital Care Manual	Policies Section	Page
Effective Oct 1, 2021	Professional Conduct and Agency Code of Ethics		11

As a pre hospital provider and/or Agency, it is expected to follow this code of professional ethics:

- Respect all patients regardless of socio-economic status, financial status or background. Dignity includes greeting, conversing, respectful mannerisms, and protecting physical privacy.
- Respect every person’s right to privacy. Sensitive information regarding a patient’s condition or history should only be provided to medical personnel with an immediate need-to-know. Sensitive information regarding our profession may only be provided to those with a right to know.
- Provide the patient with the best possible care by continuously improving understanding of the profession and maintaining continuing education and required certifications. Protect the patient from incompetent care by knowing the standard of care and being able to identify those who do not.
- Protect the health and well-being of the patient, yourself, your co-workers and the community by constantly following safety guidelines, principles and practices.
- Act within your training, know your limitations, and accept responsibility for both satisfactory and unsatisfactory actions.
- Demonstrate devotion by maintaining confidentiality, assisting in improving morale and not publicly criticizing.
- Demonstrate professionalism by maintaining high moral, ethical and grooming standards. Do not participate in behavior that would discredit you, your co-workers and the profession.

- A fundamental responsibility of the EMS Provider is to conserve life, to alleviate suffering, to promote health, to do no harm, and to encourage the quality and equal availability of emergency medical care based on human need, with respect for human dignity, unrestricted by consideration of nationality, race, creed, color or status.

- Uphold the law and perform the duties of citizenship; as a professional, I further understand that it is a never-ending responsibility to work with concerned citizens and other healthcare professionals in promoting a high standard of emergency medical care to all people.

EMS agencies are expected to advertise in a responsible manner and in accordance with rules, regulations, and statutes to assure the public is protected against misrepresentation.

No agency (public or private) shall mislead, advertise, or identify their vehicle or agency as providing any EMS service unless the agency does, in fact, provide said service as defined in the EMS Act and has been approved by IDPH.

Any person (or persons) who violate the EMS Act, or any rule promulgated pursuant there to, could be subject to legal actions. It is the responsibility of all Peoria Area EMS System providers to report any such infractions of this section to the EMS Medical Director.

Citizens in need of out-of-hospital medical services rely on the EMS System and the existence of state licensure/ certification or national certification to assure that those who respond to their calls for aid are worthy of this extraordinary trust. In light of the high degree of trust conferred upon EMS providers by virtue of licensure and certification, EMS providers should be held to a high standard. For these reasons, the EMS certifying/licensing agency has a duty to exclude individuals who pose a risk to public health and safety by virtue of conviction of certain crimes.

System Certification of individuals convicted of felonies present an unreasonable risk to public health and safety. Thus, applications for certification by individuals convicted of any felony crime are subject to review by IDPH and the System medical director.

	Peoria Area EMS System Prehospital Care Manual	Policies Section	Page
Effective Oct 1, 2021	Agency Compliance Waiver/ HIPAA		12

IDPH/ PAEMS System Compliance Waiver Policy

If compliance with IDPH Rules and Regulations or the Peoria Area EMS System Policies results in unreasonable hardship, the EMS provider agency shall petition the PAEMS System and IDPH for a temporary rule waiver. They must include the following:


- Cover letter, to include: *agency name, IDPH agency number, agency official(s), agency designated contact person, telephone number, statement of the problem and proposed waiver.*
- Explanation of why the waiver is necessary.
- Explanation of how the modification will relieve problems that would be created by compliance with the rule or policy as written.
- Statement of and justification for the time period (maximum one year) of which the modification will be necessary. This section must also include a chronological plan for meeting total compliance requirements.
- Staffing waivers require local newspaper advertisement explaining staffing shortage, mention that there will be “no reduction in standard of care”, and a request for new volunteers/ employees.
- Submit a copy of 60-day staffing schedule.

The petition should be submitted to the Peoria Area EMS System Medical Director for review and approval. The IDPH Regional EMS Coordinator will then review the petition. If needed, the Illinois Department of Public Health may request review of the petition by the State Advisory Board. These recommendations will be forwarded to the Director of IDPH for final action.

HIPAA Policy

Peoria Area EMS System providers are involved in the collection, handling, documentation, or distribution of patient information. Therefore, EMS personnel are responsible for the protection of this information. Unnecessary sharing of confidential information will not be tolerated. Peoria Area EMS System personnel must understand that breach of confidentiality is a serious infraction and violation of HIPAA with legal implications.

Only Peoria Area EMS System personnel and hospital medical staff directly involved in a patient’s care or personnel involved in the quality assurance process are allowed access to the patient’s medical records and reports. Authorized medical records and billing personnel are allowed access to the patient’s medical records and reports in accordance with hospital and EMS provider policies.

	Peoria Area EMS System Prehospital Care Manual	Policies Section	Page
Effective Oct 1, 2021	Communications and Patient Care Report Policy		13

The **TWIAGE** app is the preferred method of communications with all participating area hospitals, however, radio communications are a vital component of prehospital care. Information reported should be concise and provide an accurate description of the patient’s condition as well as treatment rendered.

Essential components of the communication to the ED

- **Unit identification**
- **Destination & ETA**
- **Age/sex**
- **Chief complaint**
- **Assessment (General appearance, degree of distress & level of consciousness)**
- **Vital signs:**
 1. **Blood pressure (auscultated or palpated if unable to auscultate)**
 2. **Pulse (rate, quality, regularity)**
 3. **Respirations (rate, pattern, depth)**
 4. **Pulse oximetry, if indicated**
 5. **Pupils (size & reactivity)**
 6. **Skin (color, temperature, moisture)**
- Pertinent physical examination findings and SAMPLE history
- Treatment rendered and patient response to treatments

If Medical Control contact is necessary to obtain physician orders (where indicated by protocol), diligent attempts must be made to establish Medical Control contact via:

1. **TWIAGE** app
2. Cellular telemetry (309) 655-6770
3. MERCI radio

If Medical Control contact is not necessary, contact the receiving hospital via the **TWIAGE** app. The **TWIAGE** app may be on a tablet, laptop or cell phone (personal or agency). Any questions about the **TWIAGE** app please contact the EMS office at (309)655-2113 or your agency point of contact. Any EMS Provider may contact Medical Control for any treatments requiring a physician’s orders. Delay or failure to contact Medical Control in required situations is a quality assurance qualifier. These Standing Medical Orders or Protocols are to be utilized as Off-Line Medical Control.

High Risk Refusals require Medical Control consultation prior to securing and accepting the refusal and terminating patient contact. High risk refusals involve cases where the patient’s condition may warrant delivery of care in accordance with implied consent of the *Emergency Doctrine* or other statutory provision.

High risk refusals include, but are not limited to:

- Head injury (based on mechanism or signs & symptoms)
- Presence of alcohol and/or drugs
- Anytime medications are given and patient refuses transport (**EMR & BLS**)
- Significant mechanism of injury (*e.g.* rollover MVA)
- Altered level of consciousness or impaired judgment
- Minors (17 years old or younger, regardless of injury)
- Situations that involve bypassing a closer hospital

Low Risk Refusals do not require Medical Control consultation (for BLS, ILS & ALS levels) if the prehospital provider determines that the patient meets the *Low Risk Criteria* and there is no doubt that the patient understands the risk of refusal. The patient cannot be impaired and must be able to consent to the refusal. Medical Control should be contacted if there are any concerns about the patient's ability to refuse. Follow the instructions on the PAEMS Refusal form.

If the EMS provider has not been able to contact Medical Control via cellular telemetry, telephone or MERCI radio, the EMS provider must initiate the appropriate protocol(s). Upon arrival at the receiving hospital, an incident report must be completed and forwarded to the EMS Office within 24 hours of the occurrence. This report should document all aspects of the run with specific details of the communications failure and initiation of the Peoria Area EMS System *Standing Medical Orders and Standard Operating Procedures*.

Documentation of patient contacts and care is a vital aspect of assuring continuity of care, providing a means of quality assurance and historical documentation of the event. It is just as important as the care itself and should be an accurate reflection of the events that transpired.

1. All EMS providers must complete a patient care report for each patient contact or *request* for response (*e.g.* agency is cancelled en route to a call then a "cancelled call" chart must be completed).
2. If the patient care report cannot be completed prior to departing the ED a **TWIAGE** report or a Peoria Area EMS System *Preliminary Field Medical Report Form* **must** be completed and left with the ED staff. The patient care report should then be completed and faxed to the ED as soon as possible after the call (within the shift).
3. Documentation must be completed on System approved forms and/or System approved electronic reporting systems.
4. Failure to leave written documentation will be reported to the EMS Office by ED personnel. Agencies and/or personnel failing to comply with documentation requirements will be reported to the EMS Medical Director and corrective action may be taken to assure documentation policies and procedures are followed.
5. Non-transport agencies must complete patient care documentation immediately following each call.
6. Copies of all patient care reports or access to electronic versions must be provided to the EMS Office.

	Peoria Area EMS System Prehospital Care Manual	Policies Section	Page
Effective Oct 1, 2021	System Certification/ Relicensure Policy		15

It is the responsibility of the Resource Hospital to confirm the credentials of the System’s EMS providers. System certification is a *privilege* granted by the EMS Medical Director in accordance with the rules and regulations of the Illinois Department of Public Health.

1. The System applicant must be a member of, in a training program, or in the process of applying for employment with a Peoria Area EMS System provider agency.
2. The System applicant must submit PAEMS System Entry Form along with:
 - IDPH license (EMR, EMT, Intermediate, Paramedic, or PHRN)
 - National Registry certification (if applicable)
 - AHA ACLS (Intermediate, Paramedic, PHRN)
 - ITLS/ PHTLS (Intermediate, Paramedic, PHRN)
 - PEPP or AHA PALS (Intermediate, Paramedic, PHRN)
 - CPR {AHA Healthcare Provider OR American Red Cross} (FR-D, EMT, Intermediate, Paramedic or PHRN)
 - Letter of reference from current EMS Medical Director (if applicable)
 - Resume´ (education and employment history)
3. The System applicant must pass the appropriate Peoria Area EMS System Protocol Exam with a score of **80% or higher**. The applicant may retake the exam with the approval of the EMS Medical Director.
4. Successfully complete any practical skills evaluations if requested by the EMS Medical Director.
5. ALS providers must meet with the EMS Medical Director for final approval.
6. Completion of a probation period may be required at the discretion of the medical director
7. The EMS Medical Director reserves the right to deny System provider status or to place internship & field skill evaluation requirements on any candidate requesting System certification at any level.

In addition to minimum continuing education requirements for re-licensure, EMS providers in the Peoria Area EMS System must maintain the following:

EMR Emergency Medical Responder	24 Hours	Current BLS CPR Provider Card
EMT Emergency Medical Technician	60 Hours	Same as EMR and 80% grade on protocol exam
EMT-I, EMT-P, and PHRN	80(ILS), 100 (ALS) Hours	Same as EMT plus current AHA PALS or PEPP, AHA ACLS, and ITLS

Active Provider – The EMS Provider is considered an active provider if they:

- Are System-certified at the level of his/her IDPH licensure level.
- Are active and functions at his/her certification level with a PAEMS System agency providing the same level of service.

- Maintain all continuing education requirements, certifications, and testing requirements in accordance with System policy for his/her level of System certification.

Sub-certified Provider – An EMS Provider is considered to be a sub-certified provider if they:

- Are System-certified at a level other than his/her IDPH licensure level.
- Are active and functions as a provider with a PAEMS System agency at a level of service other than his/her IDPH licensure level.
- Maintain all continuing education requirements, certifications, and testing requirements in accordance with System policy for his/her level of System certification.
- RESTRICTIONS:
 - A sub-certified EMS provider may only function within the scope of practice of the individual's System certification and the provider level of the EMS agency.
 - A sub-certified EMS provider is **prohibited** from performing skills the individual is not System-certified to perform regardless of the IDPH licensure level.
 - A sub-certified provider is restricted to identifying himself/herself as a provider at his/her level of System certification when functioning with a PAEMS System agency (this includes uniform patches and name tags).

Inactive (Non-participating) Provider – An EMS Provider is considered to be inactive if they were System-certified but have not functioned with a PAEMS System agency for greater than 60 days, and they maintain IDPH CE requirements.


- RESTRICTIONS:
 - An inactive provider is **prohibited** from identifying themselves and performing skills as an EMS provider in the Peoria Area EMS System.
 - An inactive provider must apply for independent re-licensure with IDPH

A System participant who resigns from or is terminated by a System provider agency has a 60-day grace period to re-establish membership/active status with another System provider agency.

1. To be re-licensed as an EMS provider, the licensee must submit the required documentation for renewal with the Resource Hospital (EMS Office) at least **60 days** prior to the license expiration date. **Failure to complete these requirements may result in delay or denial of re-licensure. The licensee will be responsible for any late fees or class fees incurred as a result.**
2. A licensee who has not been recommended for re-licensure by the EMS Medical Director will be instructed to submit a request for independent renewal directly to IDPH.
3. The license of an EMS provider shall terminate on the day following the expiration date shown on the license. An EMS provider may NOT function in the Peoria Area EMS System until a copy of a current license is on file in the EMS Office.
4. An EMS provider whose license has expired may, **within 60 days after license expiration**, submit all re-licensure material and any late fees to IDPH.
5. Any EMS provider whose license has expired for a period of more than 60 days may not be re-licensed and must complete all aspects of the initial training program required for licensure and complete all necessary IDPH requirements.

****NOTE:** Failure to re-license at any level does not “automatically” drop a provider to a lower level of certification

6. At any time **prior to the expiration of the current license**, with exception of PHRN the EMS Provider may downgrade their EMS license to a lower level. They must make their request in writing to the medical director and IDPH as well as surrender their current EMS license to the medical director.
7. At any time **prior to the expiration of the current license**, an EMT may revert to the EMR status for the remainder of the license period. The EMT must make this request in writing to the EMS Medical Director & the Department and must submit their original **current** EMT license to the Department.
8. The provider must submit a copy of their new IDPH license to their agency(s) and to the EMS Office.

	Peoria Area EMS System Prehospital Care Manual	Policies Section	Page
Effective Oct 1, 2021	Patient Right of Refusal and Destination Policy		18

A patient may refuse medical help and/or transportation. Once the patient has received treatment, he/she may refuse to be transported if he/she does not appear to be a threat to themselves or others. **Any person refusing treatment must be informed of the risks of not receiving emergency medical care and/or transportation.** NOTE: Family members cannot refuse transportation of a patient to a hospital unless they can produce a valid *Durable Power of Attorney for Healthcare*.

1. Assure an accurate patient assessment has been conducted to include the patient’s chief complaint, history, objective findings and the patient’s ability to make **sound** decisions.
2. Explain to the patient the risk associated with his/her decision to refuse treatment and transportation, and have the patient complete the “Patient Decision Making Competency Exam”.
3. Secure Medical Control approval of all **high risk refusals** (low risk refusals for Emergency Medical Responders) in accordance with the *Online Medical Control Policy*.
4. Complete the *Against Medical Advice/Refusal Form* and have the patient sign the form. If the patient is a minor, this form should be signed by a legal guardian or *Durable Power of Attorney for Healthcare*. **NOTE:** Parental refusals may be accepted by voice contact with the parent (i.e. by telephone) if the EMS Provider has made reasonable effort to confirm the identity of the parent and the form may be signed by an adult witness on scene. This should be clearly documented on the refusal form and in the patient care report.
5. If available, it is preferable to have a police officer at the scene act as the witness. If a police officer is not available, any other bystander may act as a witness. However, his/her name, address & telephone number should be obtained and written on the back of the report.
6. If the patient refuses medical help and/or transportation after having been informed of the risks of not receiving emergency medical care and refuses to sign the release, clearly document the patient’s refusal to sign the report. Also, have the entire crew witness the statement and have an additional witness sign your statement, preferably a police officer. Include the officer’s badge number and contact Medical Control.

If the patient elects to be transported they should be transported to the closest appropriate hospital. A patient (or the patient’s *Power of Attorney for Healthcare*) does have the right to make an informed decision to be transported to their hospital of choice.

Bypassing the nearest hospital to respect the patient’s hospital choice is a decision based on medical benefits and associated risks and should be made in accordance with:

1. Urgency of care and risk factors based on:
 - Mechanism of injury (physiologic factors)
 - Perfusion status and assessment findings (anatomical factors)
 - Transport distance and time (environmental factors)
2. Medical Control consultation
3. Capacity of the nearest facility or facility of choice
4. Available resources of the transporting agency
5. Traffic and weather conditions



The patient's hospital preference may be honored if:

- There are no identifiable risk factors.
- The patient has a secure airway.
- The patient is hemodynamically stable.
- The patient has been advised of the closer hospital.
- Medical Control approves.

The EMS provider must explain the benefits versus the risks of transport to a more distant hospital and contact Medical Control for approval. The patient (or representative) must sign a Peoria Area EMS System *AMA/Refusal Form* documenting that the patient understands the risks. **No transporting service shall bypass a hospital in order to meet an ALS intercept (including Life Flight) unless approved by Medical Control.**

Patients may be transported to the hospital of choice within the city limits of Peoria without contacting Medical Control for approval as differences in transport times is negligible.

All **trauma patients** fall under the American College of Surgeons *Field Triage Decision Scheme*. A trauma patient who meets the ACS Field Triage Guidelines shall be transported to the Level 1 Trauma Center unless otherwise directed by Medical Control.

		Peoria Area EMS System Prehospital Care Manual	Policies Section	Page
Effective Oct 1, 2021		Transfer of Care Policy		20

EMS personnel must not leave or terminate care of a patient if a need exists for continuing medical care that must be provided by a knowledgeable, skilled and licensed provider unless one or more of the following conditions exist:


1. Appropriate receiving hospital personnel assume medical care and responsibility for the patient.
2. The patient or legal guardian refuses EMS care and transportation (In this instance, follow the procedure as outlined in the *Patient Right of Refusal Policy*).
3. EMS personnel are physically unable to continue care of the patient due to exhaustion or injury.
4. When law enforcement personnel, fire officials, or the EMS crew determine the scene to be unsafe and immediate threat to life or injury hazards exist.
5. If Medical Control concurs with a DNR order and/ or cease efforts orders request.
6. Whenever specifically requested to leave the scene due to an overbearing need (e.g. disasters, triage prioritization).
7. Medical care and responsibility for the patient is assumed by comparably trained, certified and licensed personnel in accordance with applicable policies.

If EMS personnel arrive on scene, establish contact and evaluate a patient who then refuses care, the EMS crew shall conduct termination of the patient contact in accordance with the *Patient Right of Refusal Policy* and *On-Line Medical Control Policy*.

EMS personnel may leave the scene of an illness or injury incident, where initial care has been provided to the patient and the **only** responsibility remaining for the EMS crew is transportation of the patient or securing a signed refusal under the following conditions:

1. Delay in transportation of another patient (i.e. trauma patient) from the same incident would threaten life or limb.
2. An occurrence of a more serious nature elsewhere necessitates life-saving intervention that could be provided by the EMS crew (and without consequence to the original patient).
3. More appropriate or prudent transportation is available.

During the transport of a patient by ambulance, should the EMS crew come across an emergency requiring ambulance assistance; the local EMS system will be activated. Crews involved in the treatment and transportation of an emergency patient are not to stop and render care. The priority is to the patient onboard the ambulance. In the event you are transporting the patient with more than two (2) appropriately trained prehospital personnel, you may elect to leave one medical attendant at the scene to render care and the other personnel will continue to transport the patient to the receiving facility. A smooth transition of care between EMS providers is essential for optimum patient care. First Responder and BLS crews routinely transfer care to transporting EMS providers. The transfer of advanced procedures presents unique concerns for both the EMS provider relinquishing patient care as well as the EMS provider assuming patient care. Cooperation between all EMS personnel is encouraged and expected. Once on scene, the EMS transporting agency shall, in conjunction with Medical Control, be the on-scene authority having jurisdiction in the determination of the patient care plan. The rank or seniority of a non-transport provider shall not supersede the authority vested in the transporting EMS provider by the EMS Medical Director. Upon the arrival of the transporting agency, the non-transport provider should provide a detailed verbal report, and if available, utilize **TWIAGE** to transfer all communications and then **immediately transfer care to the transporting provider.**

	Peoria Area EMS System Prehospital Care Manual	Policies Section	Page
Effective Oct 1, 2021	Intercept/ In Field Service Level Upgrade Policy		21

Intercept Policy-

If a patient's condition warrants a higher level of care and an advanced level is available, then the more advanced agency may be called for immediate assistance. Conditions warranting advanced assistance include, but are not limited to:

- Trauma patients entrapped with extrication required.
- Patients with compromised or obstructed airways.
- Respiratory and Cardiac arrests.
- Patients exhibiting signs of hypoxemia (e.g. respiratory distress, restlessness, cyanosis) unrelieved by oxygen.
- Patients with altered mental status/altered level of consciousness.
- Chest pain of cardiac nature unresolved with rest, oxygen and/or nitroglycerin.
- Patients exhibiting signs of decompensated shock (BP<100mmHg, pallor, diaphoresis, altered LOC, tachypnea).
- Unconscious or unresponsive patients (other than a behavioral episode).
- Any case in which the responding agency or Medical Control deems that advanced care would be beneficial to patient outcome.
- Pediatric cases with any of the conditions listed above.

Regardless of the response jurisdiction, if two (2) different agencies with different levels of care are dispatched to and arrive on the scene of an emergency, the agency with the highest certification level shall assume control of the patient.

The following guidelines also apply:


- Patients should not be transferred from ambulance-to-ambulance. The higher-level personnel, along with proper portable equipment, shall board the requesting agency's ambulance.
- The higher level personnel will oversee patient care with the assistance of the requesting agency's personnel.
- Once the higher level personnel have boarded the requesting agency's ambulance, the higher level provider will determine the transport code for the remainder of transport:

In the event that a PAEMS System approved ALS or ILS Provider is used to assist a BLS Provider an **in-field service level upgrade*** can be utilized to optimize patient outcome. To provide guidelines for infield upgrades of ambulances to higher level of care.

In certain circumstances, it may become necessary to upgrade BLS vehicles to the Intermediate or Advanced Life Support level. In the event that it becomes necessary to upgrade a BLS ambulance, the following steps must be followed:

The BLS ambulance must be approved by the PAEMS System to function as an ALS or ILS ambulance for the duration of this staffing arrangement.

- ALS or ILS personnel may board a BLS ambulance to render a higher level of prehospital emergency care thereby temporarily upgrading that BLS ambulance to the status of ALS or ILS.
- All portable ALS or ILS equipment as listed in the PAEMS Ambulance Supply List must be present on the BLS ambulance.
- The ALS or ILS personnel will assume responsibility for the treatment and transport of patients while on the up graded ambulance. BLS providers may assist with patient care on scene and during transport if requested.
- Once the patient has been transported to the hospital and the call terminated, the ALS or ILS equipment may be removed from the EMS unit, or properly secured as to not be utilized by BLS personnel, and it will return to its BLS certification level.

	Peoria Area EMS System Prehospital Care Manual	Policies Section	Page
Effective Oct 1, 2021	Incident Reporting Policy		22

Prehospital care providers shall complete a Peoria Area EMS System (or the individual agency) *Incident Report Form* whenever a System related issue occurs. These reports are for informational QA/QI purposes only and shall be treated as such. The following information needs to be provided on the form:

1. Date of occurrence
2. Time the incident occurred
3. Location of the incident
4. Description of the events
5. Personnel involved
6. Agency and/or institution involved
7. Copy of the patient care record and/or any other related documents


1. All incident report forms shall be given to the EMS provider's chief, supervisor, training officer, or quality assurance coordinator who will assess the incident and will forward the report to the Peoria Area EMS System Quality Assurance Coordinator.
2. The EMS QA Coordinator will review the incident and notify the EMS Medical Director and the appropriate course of action will be determined.
3. The EMS provider originating the report will be notified of the resolution.

Situations requiring EMS Office notification include:

- Any situation which is not consistent with routine operations, System procedures or routine care of a particular patient. It may be any situation, condition or event that could adversely affect the patient, co-worker or the System.
- Any deviation from Peoria Area EMS System policies, procedures or protocols.
- **Medication and/ or Treatment errors and Equipment failures**
- Delays in patient care or scene response
- Medical Control contact was indicated but unavailable
- Violence toward EMS providers that results in injury or prevents the provider from delivering appropriate patient care
- Inappropriate Medical Control orders
- Repeated concerns/conflicts between agencies, provider/physician or provider/hospital conflicts
- Patterns of job performance that indicate skill decay or knowledge deficiencies affecting patient care

Situations subject to review and resolution at the agency level include:

- Conflicts between employees, agencies, or issues that do not adversely affect patient care.

	Peoria Area EMS System Prehospital Care Manual	Policies Section	Page
Effective Oct 1, 2021	Termination of Resuscitation (DNR) Policy		23

Unsuccessful cardiopulmonary resuscitation (CPR) and other interventions may be discontinued or not performed following consultation with Medical Control. Circumstances for this are listed below:

- Prolonged resuscitation efforts (either BLS alone or combined BLS and ALS) beyond 15 minutes without a return of spontaneous circulation or shockable rhythm are usually futile, unless cardiac arrest is compounded by hypothermia, submersion in cold water.
- Full ACLS has been instituted (ALS/ILS) to include rhythm analysis and defibrillation if indicated, appropriate airway management, and three rounds of the appropriate ACLS medications are given without return of spontaneous circulation.
- Extrication is prolonged (>15 minutes) in a pulseless, apneic patient, with no resuscitation possible during extrication (hypothermia is an exception).
- Patient has a valid DNR where resuscitation efforts were initiated prior to knowledge of DNR status.
- Correctable causes or special resuscitation circumstances have been considered and addressed without positive results.
- Per family request.


Document all elements of patient care and interactions with the patient’s family, personal physician, medical examiner, law enforcement and medical control in the EMS patient care report (PCR).

This **Do Not Resuscitate (DNR)** policy is a tool to be used in the prehospital setting to set forth guidelines for providing CPR or for withholding resuscitative efforts. The purpose of this policy is to specify requirements for valid DNR orders and to establish a procedure for field management of these situations.

A DNR policy shall be implemented only after it has been reviewed and approved by the Illinois Department of Public Health in accordance with the requirements of [Section 515.380 of the Illinois Administrative Code](#).

1. Any EMR, EMT, Intermediate, Paramedic or PHRN who is actively participating in a Department approved EMS system may honor, follow and respect a valid DNR. Medical Control must be contacted in all cases involving a DNR.
2. By itself, a DNR order does not mean that any other life-prolonging therapy, hospitalization or use of EMS is to be withheld. DNR orders do not affect treatment of patients who are not in full arrest (pulseless and breathless).
3. When EMS personnel arrive on scene and discover the patient is pulseless and breathless and CPR may or may not be in progress, resuscitation (at minimum CPR) must be initiated unless one or more of the following conditions exist:
 - Obvious signs of biological death are present.
 - Death has been declared by the patient’s physician or the coroner.
 - A valid POLST is present and the EMS provider has made reasonable effort to verify the identity of the patient named in the order (i.e. identification by another person, ID band, photo ID or facility, home-care or hospice nursing staff).
 - If the above signs of death are recognized, EMS personnel must contact Medical Control to confirm the decision not to attempt resuscitation prior to contacting the coroner.

- If the patient's primary care physician is at the scene of (or on the phone) and requesting specific resuscitation or DNR procedures, EMS personnel should verify the physician's identity (if not known to the EMT) and notify Medical Control of the request of the on-scene physician. Follow Medical Control orders.
- The only recognized POLST form EMS providers are obligated to honor, follow & respect is the standardized Illinois POLST form which has the Seal of the State of Illinois in the upper left corner. All signature lines must be completed in order for the DNR to be valid.
- Any other advance directives or "living will" cannot be honored, followed and respected by pre-hospital care providers. EMS personnel must contact Medical Control for direction regarding any other type of advanced directive. Resuscitation should not be withheld during the process of contacting or discussing the situation with the on-line Medical Control physician.
- A Durable Power of Attorney for Healthcare is an agent who has been delegated by the patient to make any healthcare decisions (including the withholding or withdrawal of life-sustaining treatment) which the patient is unable to make. The durable Power of Attorney for Healthcare agent must provide positive identification (i.e. driver's license, photo ID, etc.)
- Revocation of a written POLST order is accomplished when the POLST order is physically destroyed or verbally rescinded by the physician who signed the order and/or the person who gave consent to the order.
- Prehospital care providers have a duty to act and provide care in the best interest of the patient. This requires the provision of full medical and resuscitative interventions when medically indicated and not contraindicated by the wishes of the patient.
- When managing a patient that is apparently non-viable, but desired and/or approved medical measures appear unclear (i.e. upset family members, disagreement regarding DNR order, etc.), EMS personnel should provide assessment, initiate resuscitative measures and contact Medical Control for further direction.
- Appropriate patient care reports will be completed on all patients who are not resuscitated in the prehospital setting. A copy of the POLST form should be retained and attached as supporting documentation to the prehospital care report form.

	Peoria Area EMS System Prehospital Care Manual	Policies Section	Page
Effective Oct 1, 2021	Withholding Resuscitation/ Notification of the Coroner/ Crime Scene Policy		25

It is the policy of the Peoria Area EMS System that CPR need not be initiated when death has been determined based on the criteria outlined below. Peoria Area EMS providers are required to contact Medical Control for determination of death covered in this policy. Clinical signs of death include, but are not limited to the following:

Medical

- Unresponsiveness
- Rigor mortis
- Presence of venous pooling in the body
- Incineration or extensive full thickness burns
- Transection of head or trunk
- Major blunt or penetrating trauma
- Deforming brain injury
- Lividity and/or any degree of generalized cyanosis
- Separation of heart and/or brain
- Deforming brain injury
- Decapitation
- Decomposition
- Pulselessness
- Non-reactive pupils

Trauma

- Absence of vital signs in a trauma victim upon arrival of EMS personnel despite a patent airway.

Do not initiate resuscitation in the following:

Do Not Resuscitate orders: No resuscitation efforts should be initiated when the person or family has evidence of a valid Do Not Resuscitate (DNR) order in hand.

Scene safety: The physical environment is not safe for the EMS providers to enter.

Infant death (SIDS): An infant who is apneic, and meets the above criteria may be presumed dead.

Neonatal death: A neonate who is apneic, pulseless, and exhibits neonatal maceration (softening or degeneration of the tissues after death in utero), anencephaly (absence of a major portion of the brain, skull, and scalp), or if the gestational age is less than 22 weeks and neonate shows signs of obvious immaturity (translucent and gelatinous skin, lack of fingernails, fused eyelids) may be presumed nonviable.

Notes:

- Resuscitation may be initiated if the condition of the scene indicates that withholding resuscitation could cause a potential unsafe condition for the ambulance crew.
- If the EMS providers determine the situation warrants removal of the patient from the scene, resuscitation efforts must be initiated and continued throughout transportation to the hospital and the details documented in the patient care report.

Coroners Notification:


In accordance with Section 10.6, Chapter 31 of the Illinois Revised Statutes –

1. Every law enforcement official, funeral director, EMS provider, hospital director of administration or person having custody of the body of a deceased person, where the death is one subjected to investigation under Section 10 of this Act, and any physician in attendance upon such a decedent at the time of his death, shall notify the coroner promptly.
2. Deaths that are subject to coroner investigation may include but are not limited to:
 - Accidental deaths of any type or cause
 - Homicidal deaths
 - Suicidal deaths
 - Abortions – criminal or self-induced maternal or fetal deaths

- Sudden deaths – when in apparent good health or in any suspicious or unusual manner including sudden death on the street, at home, in a public place, at a place of employment, or any deaths under unknown circumstances may ultimately be the subject of investigation.
3. The coroner (or his/her designee) should be provided the following information:
 - Your name
 - Your EMS service
 - Location of the body or death
 - Phone number and/or radio frequency you are available on
 - Brief explanation of the situation
 4. Once this information has been provided, wait for the coroner (or his/her designee) to arrive for further instructions. EMS crews may clear the scene if law enforcement is on the scene and no other emergency exists.
 5. Law enforcement personnel are responsible for death scenes once the determination of death is established with Medical Control and the coroner has been notified.
 6. If a patient is determined to be dead during transport, note the time & location and record this information on the patient care report. Immediately contact the coroner to discuss death jurisdiction. Do not cross county lines with a patient that has been determined to be dead. EMS providers should be aware of law enforcement's concern for preserving, collecting and using evidence. Anything at the scene may provide clues and evidence for the police.

Crime Scene Policy

1. Immediately notify law enforcement of any suspected crime scene (this does not necessarily include petty crimes or traffic violations).
2. If the victim is obviously dead, then he or she should remain undisturbed if at all possible.
3. Do not touch, move or relocate any item at the scene unless absolutely necessary to provide treatment to an injured, viable victim. Mark the location of any item that must be moved so the police can determine its original position.
4. Restrict access to the scene of onlookers or other unauthorized personnel on the premises of the crime.
5. Observe and note anything unusual (e.g. smoke, odors, or weapons), especially if the evidence may not be present when law enforcement arrives.
6. Give immediate care to the patient. The fact that the patient is a probable crime victim should not delay prompt care to the patient. Remember that your role is to provide emergency care, not law enforcement.
7. Keep detailed records of the incident, including your observations of the victim and the scene of the crime. Lack of records about the case can be professionally embarrassing if called to testify.

	Peoria Area EMS System Prehospital Care Manual	Policies Section	Page
Effective Oct 1, 2021	Petitioning an Emotionally Disturbed Patient/ Physical and Chemical Restraints Policy and Procedure		27

EMS providers should consider the mental health needs of a patient who appears emotionally or mentally incapacitated. This involves cases that the EMS provider has reasonable cause or evidence to suspect a patient may intentionally or unintentionally physically injure himself/herself or others, is unable to care for his/her own physical needs, or is in need of mental health treatment against his/her will.

This does not include a person whose mental processes have merely been weakened or impaired by reason of advanced years and the patient is under the supervision of family or another healthcare provider, unless the family or healthcare provider has activated EMS for a specific behavioral emergency.

1. Attempt to persuade the patient that there is a need for evaluation and transport to the hospital.
2. If persuasion is unsuccessful, contact Medical Control and relay the history of the event. Clearly indicate your suspicions and/or evidence and have the medical control physician discuss the patient's needs with the parties involved in the situation.
3. The EMS crew must then follow the direction of the medical control physician in determining the disposition of the patient or termination of patient contact. Another agency's or party's opinion should not influence the EMS provider's assistance to a mental health need.
4. Under no circumstances does transport of the patient, whether voluntarily or against his/her will, commit the patient to a hospital admission. It simply enables the EMS providers to transport a person suspected to be in need of mental health treatment.
5. If a patient is combative or may harm self or others, call law enforcement for assistance and follow the *Patient Restraint Policy*.

Patients may only be restrained if clinically justified! The use of restraints shall only be utilized if the patient is violent and may cause harm to themselves or others. Physical and/or chemical restraints are a last resort in caring for the emotionally disturbed patient.

1. To safely restrain the patient, use an appropriate number of personnel.
2. If available, EMS may use police protective custody.
3. Attempt to calm the patient and explain the procedure to the patient (and family) if possible.
4. If attempts at verbal de-escalation have failed and the decision is made to use restraints, do not waste time bargaining with the patient.
5. Remember to remove any equipment from your person which can be used as a weapon against you (e.g. trauma shears).
6. Move the patient to a backboard or the stretcher supine and place soft, disposable restraints on all 4 limbs and fasten to the backboard or stretcher.
7. Contact Medical Control as soon as possible for any additional guidance, however, do not delay safety of the crew and/ or the patient.
8. Transport as soon as possible.
9. Document circulation checks every 15 minutes (of all restrained limbs) and thoroughly document the reasons for applying restraints, time of application, condition of the patient before and after application, method of restraint and any law enforcement involvement, including any use of law enforcement equipment (e.g. handcuffs) and the time Medical Control was contacted.
10. Do not remove restraints until released by medical personnel at the receiving hospital.

Chemical Restraints Policy/Procedure: Behavioral episodes may range from despondent and withdrawn behavior to aggressive and violent behavior. Behavioral changes may be a symptom of a number of medical conditions including head injury, trauma, substance abuse, metabolic disorders, stress and psychiatric disorders. Patient assessment and evaluation of the situation is crucial in differentiating medical intervention needs from psychological support needs.

ILS Care should be directed at continuing or establishing care, continuing EMR and BLS care, conducting a thorough patient assessment, ensuring personal safety and preparing for or providing patient transport.

1. If the patient is a threat to self or others, restrain the patient and contact Medical Control as soon as possible. An order for restraints is a must.
 - If after physical restraint the patient is still a risk to self or others consider chemical restraint.
2. **Midazolam (Versed):** Intranasal Versed may be used for sedation **if absolutely necessary**. (See **intranasal dosing sheet**) **Contact Medical Control** for further orders.
3. Initiate transport as soon as possible.

ALS Care should be directed at continuing or establishing care, continuing EMR, BLS, & ILS Care, conducting a thorough patient assessment, ensuring personal safety and preparing for or providing patient transport.


1. **Haloperidol (Haldol)** Administer **Haloperidol**, 5mg IM and **Midazolam (Versed)**: 2mg IM. May repeat if needed after 10 minutes if patient is not manageable.
2. If Severe: Violent, Combative, dangerous, proceed to:
Ketamine: Ketamine 4mg/kg IM
3. Initiate transport as soon as possible.
4. After Patient is sedated, **you must initiate continuous cardiac and respiratory monitoring including EKG Monitor, Pulse Oximetry, and waveform ETCO2**. Apply oxygen as tolerated or needed after sedation.

Critical Thinking Elements

- Verbally attempt to calm and/or re-orient the patient to reality.
- **If restraints are used, thoroughly document the reasons for applying restraints, time of application, condition of the patient before and after application, method of restraint and any law enforcement involvement, including any use of law enforcement equipment (e.g. handcuffs) and the time Medical Control was contacted.**
- Consider medical etiologies of apparent behavioral disorders such as **hypoxia**, stroke/head bleed, substance abuse/overdose, and hypoglycemia.
- **Document response to sedation including vital signs, Rhythm, Pulse Ox and ETCO2.**
- **Haldol** may precipitate dystonic reactions including Restlessness, Tics, and Muscle Rigidity. If suspected, give **Benadryl** 25mg IV or IM.
- When using Ketamine, be aware of Side Effects
Laryngospasm: this very rare adverse reaction presents with stridor and respiratory distress.

Emergence reaction: presents as anxiety, agitation, apparent hallucinations or nightmares as ketamine is wearing off. For severe reactions, consider Versed 2mg IM or IV.


Nausea and Vomiting: always have suction available after ketamine administration.

	Peoria Area EMS System Prehospital Care Manual	Policies Section	Page
Effective Oct 1, 2021	On Scene Intervening Physician or other Medical Professional Policy		29

Only personnel licensed to perform care in the prehospital setting and certified in the Peoria Area EMS System are allowed to provide patient care the scene unless approved by Medical Control.

An on-scene physician (or other medical professional) does not automatically supersede the EMS provider's authority. Patient care shall not be relinquished to another person or provider unless approved by the EMS Medical Director or Medical Control.

1. If a professed, duly licensed medical professional (e.g. physician, nurse, or dentist) wishes to participate in and/or direct patient care on scene, the EMS provider should contact Medical Control and inform the base station physician of the situation.
2. If the medical professional on scene (including the patient's primary care physician) has properly identified himself/herself and wishes to direct patient care, the medical control physician must grant approval prior to acting on the on-scene medical professional's request. If care is relinquished to the professional on scene, he/she must accompany the patient to the hospital. This procedure should be explained to the provider prior to contacting Medical Control.
3. If an on-scene physician orders procedures or treatments that the EMS provider believes to be unreasonable, medically inaccurate, and/or outside the EMS provider's standard of care, the EMT should refuse to follow such orders and re-establish contact with Medical Control. In all circumstances, the EMS provider shall avoid any order or procedure that would be harmful to the patient.
4. If an on-scene medical professional (or any person claiming to be a healthcare provider) is obstructing EMS efforts or is substantially compromising patient care, the EMS provider should request law enforcement assistance and communicate the situation to Medical Control.
5. If EMS personnel or nursing staff from another system or jurisdiction (other than a requested intercept or mutual aid) are at the scene and request to provide or assist with patient care these personnel may provide assistance with the supervision of the agency having jurisdiction of the scene. Peoria Area EMS System policies, procedures and protocols must be followed regardless of the assisting EMS personnel's authorized level of care.

	Peoria Area EMS System Prehospital Care Manual	Policies Section	Page
Effective Oct 1, 2021	Concealed Weapons Policy		30

The purpose of this policy is to outline common expected procedures for intervening with patients and/or their families who under the law may be carrying a concealed deadly weapon. The intent is to reduce the potential risk of injury to emergency responders, healthcare personnel and the public. This policy aims to mutually respect the rights of citizens who lawfully carry a concealed weapon as well as to provide safety for emergency responders and healthcare providers.


This policy pertains to all weapons, including, but not limited to firearms, hunting knives, and electronic weapons.

1. No weapon will ever be transported unsecured inside the ambulance whether belonging to the patient or family member. The only exception to this rule will be for on duty law enforcement personnel.
2. **Assume all weapons are loaded. Never attempt to unload a firearm, or engage the safety.**
3. If a patient refuses to remove or allow removal of the weapon, that patient is considered to be refusing medical care and the scene now unsafe. EMS personnel should leave and wait for Law Enforcement to secure the scene.
4. Optimally, a patient with a concealed weapon away from their residence should have it taken control of by local law enforcement. The goal is for the EMS provider to minimally handle any weapon
5. If patient has a weapon, and is able, ask them to lock up their weapon at home or in the trunk of their vehicle.
6. The weapon may be removed by properly trained EMS personnel, tagged with patients name and secured in a lockbox.
7. If weapon is located while transporting a patient, the ambulance should be stopped, weapon tagged with patient's name, secured in a lockbox.
8. If a weapon is found in a holster, the weapon should remain in the holster while it is secured.
9. When a weapon is encountered on a call, the patient care report should include documentation that a weapon was located, type of weapon, how it was recovered, where it was located, what the disposition was, and any actions or comments made to or by the patient.

Transfer of Weapon:

1. Each hospital will have its own procedure when it comes to dealing with secured weapons that arrive by EMS. If you are unsure of the receiving hospital's policy, please inquire with their staff on your arrival.
2. When transporting a patient notify the receiving facility that security will need to meet you to take control of the patient's personal property, and locked in their designated safe location.
3. A "Transfer of Personal Property" form must be completed and signed by all parties.

The purpose of this page is to educate and inform our EMS providers concerning the designated areas where carrying firearms is prohibited according to **Section (65.) of the Firearm Concealed Carry Act.**

	Peoria Area EMS System Prehospital Care Manual	Policies Section	Page
Effective Oct 1, 2021	Infectious Disease Exposure Policy		31

The following procedure has been established in accordance with the Illinois State Statutes, Centers for Disease Control recommendations and OSHA standards. All Peoria Area EMS System agencies should have a specific exposure control program and post exposure plan.

1. Utilization of body substance isolation gear during all patient contacts is an effective means of avoiding exposure to bodily fluids. EMS personnel should don protective gear prior to entering a scene or situation that may increase the risk of exposure to bodily fluids or other potentially infectious agents.
2. Thorough hand washing should be accomplished immediately after each patient contact or handling of potential infectious vectors.
3. EMS personnel should consult their agency's exposure control program for specific guidelines in the type of protective gear, policies, and procedures.

An exposure incident has occurred when, as a result of the performance of an EMS provider's duty, the provider's eyes, mouth, mucous membrane or area of non-intact skin has come in contact with body fluids or other potentially infectious vector. This includes parenteral contact with blood or other potentially infectious materials. If EMS personnel treating and/or transporting a patient are directly exposed to a patient's body fluids or infectious vector, the provider(s) should immediately report the incident. This includes notifying the EMS provider's supervisor, obtaining the Peoria Hospitals Communicable Disease Incident Form and following post exposure procedures.

1. Thoroughly cleanse the exposed area with soap and water immediately.
2. The eyes and/or mouth of the provider should be thoroughly rinsed with water if exposed.
3. Immediately seek treatment at the emergency department where the source patient was transported. If the source patient was not transported to an emergency department, treatment should be sought at a local hospital (emergency department).
4. Complete the Peoria Hospitals Communicable Disease Incident Form. The completed form should be sealed in an envelope addressed with the words "Attention Infection Control" and be left with the emergency department charge nurse. The charge nurse will forward the envelope to the infection control department. The EMS provider should also provide a copy to his/her supervisor and to the EMS Office within 24 hours.
5. A request should be made for consent to test the source patient's blood for HBV/HCV/HIV infectivity. If consent is granted, a blood sample shall be drawn and results of testing documented. Testing is not necessary if the source patient is known to be infected with HBV or HIV.
6. Results of tests performed on the source patient shall be made available to the exposed EMS provider's private or occupational physician while maintaining confidentiality of all persons involved.
7. The exposed EMS provider will be given the opportunity for a blood specimen collection and testing to determine baseline assessment for HBSAB/HIV. If the EMS provider does not wish to be tested, the blood sample must be maintained for 90 days. The EMS provider may consent to testing at any time within that period.
8. The EMS provider should follow-up with his/her private or occupational physician and the provider should be advised of available post-exposure counseling.
9. All findings or diagnosis shall remain confidential.

Questions concerning exposure control program requirements or post exposure procedures should be directed to the EMS provider's supervisor, training officer or infection control dept.


1. If a patient is suspected to have, or is diagnosed with a reportable communicable disease, a copy of the ambulance patient care report will be forwarded to Infection Control Department as soon as possible by the receiving hospital emergency department supervisor.

2. The Infection Control Department will maintain a log and file. If any patients treated and/or transported by EMS providers are diagnosed as having one of the specified diseases, the designated EMS provider(s) will be notified by the Infection Control Department within seventy-two (72) hours after the confirmed diagnosis is known.

3. Specified diseases requiring notification of EMS personnel by the Infection Control Department may include but not limited to:

- Acquired Immunodeficiency Syndrome (AIDS)*
- AIDS-Related Complex (ARC)*
- Anthrax
- Chickenpox
- Cholera
- Novel Coronavirus (Covid 19)
- Diphtheria
- Hepatitis B
- Hepatitis non-A, non-B
- Herpes simplex
- Human Immunodeficiency Virus (HIV) infection*
- Measles
- Meningococcal infections
- Mumps
- Polio
- Rabies (human)
- Rubella
- Severe Acute Respiratory Syndrome (SARS)
- Smallpox
- Tuberculosis (TB)
- Typhus

*For confirmed diagnosis of AIDS or HIV, the letter of notification will not be sent unless emergency personnel indicate that they may have had blood or body substance exposure

	Peoria Area EMS System Prehospital Care Manual	Policies Section	Page
Effective Oct 1, 2021	Substance Abuse Policy		33

PURPOSE:

OSF HealthCare and OSF EMS Systems is committed to providing an environment free of the negative effects of substance abuse. Substance abuse is strictly prohibited while on duty and while at OSF.

DEFINITIONS:

Prohibited Substances - Prescription drugs used inconsistent to the EMS provider/student's legitimate prescription, unauthorized controlled substances or prescription drugs, illegal drugs, marijuana, alcohol, or otherwise lawful substances abused by an EMS provider/student because of the substance's intoxicating effects.

1. **Prohibited Substances** do not include substances which are prescribed to an EMS provider/student and intended to be delivered and administered to the EMS provider/student as a patient under the care of a physician or by an authorized healthcare provider. However, the possession and/or use of such substances must be consistent with the prescription provided to the EMS provider/student, must comply with OSF's Drug Free Workplace (246) policy, and the EMS provider/student must not be impaired while on duty or on OSF property.

Otherwise lawful substances abused by an EMS provider/student because of the substance's intoxicating effects include, but are not limited to, lawful substances such as over-the-counter medications, paints, thinners, solvents, etc. that may cause impairment while on duty.

Substance Abuse - The use, possession, or distribution of **Prohibited Substances**.

POLICY:

1. OSF EMS Systems recognizes that safety and productivity is compromised by substance abuse which increases the potential for accidents, substandard performance, and damage to the reputation of OSF.
2. Any EMS provider/student at OSF is prohibited from: a) reporting to duty under the influence of Prohibited Substances, b) distributing Prohibited Substances while on duty, or c) possessing Prohibited Substances at OSF.
3. Any prehospital provider who has been informed, or has reason to believe or suspect that use of a substance (prescription or non-prescription) may present a safety risk or may otherwise impair an EMS provider/student's conduct and/or performance, must immediately report such substance use to the EMS Medical Director or his/her designee.
4. Any EMS provider/student whose use of substance jeopardizes the safety of themselves, patients, co-workers and/or bystanders, will be deemed "unfit for work" and subject to required drug and/or alcohol testing.
5. Any EMS provider/student who violates this Substance Abuse policy, except those who self-identify and request assistance as explained below, will be removed from the EMS program. This may be done after only one occurrence and may result in license decertification in the EMS system at the discretion of the EMS Medical Director.
 - a. Recertification and/or readmission to the EMS program is discretionary and may only be done after the EMS provider/student has successfully received appropriate treatment, as determined by the EMS Medical Director.

EMS Provider/Student Responsibility

1. OSF EMS Systems do not require EMS provider/student to submit to blood and/or urine testing for Prohibited Substances as a routine part of initial system certification. However, individual EMS agencies may require testing as part of their employment application process.
2. It is the responsibility of the EMS provider/student to seek help before substance abuse leads to job impairment, poor performance or unsafe behavior while on duty.


Testing Protocol

1. Any EMS provider/student who violates this policy, or if there is reasonable cause to suspect an EMS provider/student is under the influence of Prohibited Substances while on duty, will be required to submit to drug and/or alcohol testing.
2. The EMS Medical Director will determine the appropriate screening as part of an investigation.
 - a. The cost of this testing will be the EMS provider/student's responsibility. Disputes related to billing of drug testing should not delay the procedure(s).
3. An EMS provider/student who refuses to cooperate with required drug and/or alcohol testing, or is caught tampering with or attempting to tamper with his/her test specimen (or the specimen of any other prehospital provider), will be subject to disciplinary action, which may include permanent suspension/decertification from the EMS system.
4. If any of the test results are positive (including THC/marijuana metabolites), the EMS Medical Director will interview the EMS provider/student. The EMS Medical Director will consult with the EMS provider/student's agency to determine if referral to an assistance program will occur.

Assistance and Disciplinary Process for Substance Abuse

OSF considers substance abuse and addiction to be a serious health problem warranting appropriate evaluation and treatment. As such, OSF EMS Systems are prepared to assist any EMS provider who has developed dependency on drugs and/or alcohol. The EMS Systems, and ultimately our patients, suffer adverse effects of an impaired provider struggling with substance abuse and addiction. As such, any EMS provider/student participating in an OSF EMS System who voluntarily requests assistance for issues related to substance abuse or addiction may contact their agency or the EMS Office for further resources and guidance.

1. Any EMS provider/student who self-identifies prior to being tested or seeks help for substance abuse will be provided resources and guidance on an appropriate assistance program. In this instance, the EMS provider/student will be suspended from the EMS program while they seek treatment; however, this will not result in license decertification in the EMS System and the EMS provider/student will be readmitted to the EMS program after successfully receiving appropriate treatment, as determined by the EMS Medical Director.
2. Any EMS provider/student who violates this policy and/or whose test results are positive will be removed from the EMS program and their license may be decertified. The EMS Office will provide resources and guidance on an appropriate treatment program. Recertification and/or readmission to the EMS program is discretionary and may only be done after the EMS provider/student has successfully received appropriate treatment, as determined by the EMS Medical Director.
 - a. If the EMS provider/student refuses to seek treatment, they will be removed from the EMS program and their license will be decertified.
3. Any EMS provider/student returning to the EMS program following treatment for substance abuse may be subject to periodic and unannounced drug and/or alcohol testing on a schedule and for a duration established by the EMS Medical Director.

	Peoria Area EMS System Prehospital Care Manual	Policies Section	Page
Effective Oct 1, 2021	ALS Controlled Substances Policy		35

ILS and ALS vehicles are to carry controlled substances as required by the regulatory system protocol. Due to the nature of these medications, there is a high potential for abuse, thus the FDA has labeled them controlled substances. As such, there must be a high degree of accountability and security which are the responsibility of the agency and its employees. This policy is to be enforced at all times. Regular checks will take place to ensure compliance with this policy.

Note: Although this policy was enacted to be consistent with DEA guidelines at the time of its development, unique situations may cause DEA inspectors to require alternative storage solutions. This policy is subject to change and adapt to any and all updates that may be deemed necessary by the DEA.

Controlled substances for patient use will be contained in a numbered box/container secured with a numbered, tamper resistant seal.

Controlled Substance Storage – Safes

An inventory of controlled substances are maintained and secured in a limited access safe located in a temperature controlled location. Access is limited to designated agency personnel and PAEMS personnel. Designated personnel will validate the inventory of the safe and sign off on the PAEMS Controlled Substance Restock Inventory & Accountability form. During the count, controlled substances must be examined for vial/ampule integrity, medication clarity, and expiration date. Any issues must be reported to the agency’s designated official and the controlled substance secured for waste (see Disposal of Controlled Substances). This inventory process requires two signatures. During the count, limit any distractions.

Restocking of Safes

The process of restocking inventory for any safe will be managed by the designated agent. As staff/agents identify approaching minimum par levels of controlled substance inventories, a request must be made to the designated agent that orders controlled substances indicating the medication and quantity required to return an adequate supply not to exceed max par. The designated agent will submit the request to OSF Pharmacy in Peoria via the Medication Charge Sheet. When the order is filled, the agent will retrieve the order and deliver to the safe requiring restock. OSF Pharmacy will generate a DEA Form 222 of which the “purchaser” copy will be maintained at the location where the controlled substance is stored. Each location maintaining a safe will possess their appropriate DEA 222 forms and display their DEA and State of Illinois registration certificates. The added controlled substances must be recorded on the PAEMS Controlled Substance Restock Inventory & Accountability form.

222 Form Renewal/Restock

222 Forms will be used when restocking/purchasing Schedule 2 Controlled Substances. 222 forms are ordered and restocked by the OSF Pharmacy. The 222 restock forms will be mailed to the agency. It is the responsibility of the agency to bring the 222 forms to the OSF Pharmacy in a timely manner.

Controlled Substance Storage – Boxes

Boxes are to be secured in an onboard safe or locking cabinet on the unit in service. Boxes are to begin each shift with appropriate sealed tag and replaced, as soon as possible, after medication is used. All controlled substance boxes are to be accounted for on PAEMS Controlled Substance Box Location Form.

Restocking of boxes

Whether the controlled substance was administered to a patient, found to be expired, or damaged, it must be replaced when possible. When restocking, the designated agent may access the safe and retrieve the specific medication, placing it in the box. Seals must be logged on the PAEMS Controlled Substance Usage Log after the box is retagged. Documentation of the removal of the medication from the safe must also be logged subtracting from the safe and adding to the box on PAEMS Controlled Substance Restock Inventory & Accountability Form. New box information must also be logged on PAEMS Controlled Substance Box Location Form.

Inventory Discrepancy

If for any reason any inventory is not correct, and/or a discrepancy is discovered, immediate notification to the designated agent and the PAEMS Medical Director is required and an immediate investigation will be initiated.

21 CFR 1304.11 (c)

The Code of Federal Regulations Title 21 Part 1304 Section 1304.11 – Inventory Requirements item (c) requires a biennial inventory. The designated agent will inventory the agency's controlled substances on a monthly basis logging counts for the purpose of compliance with the Department of Justice's Drug Enforcement Administration. The monthly inventory may consist of a joint inventory/audit in the presence of PAEMS personnel (see PAEMS Audit). The record will contain the following information: record of the date, time, counts, and two signatures.

Administration and seals

Intermediates, Paramedics, Critical Care Paramedics or PHRNs administering a controlled substance during the course of their shift, or if a seal was broken throughout shift will be required to complete an entry on the PAEMS Controlled Substance Usage Log in the narcotic box.

Damaged seals or broken contents of boxes will be reported to (and is the responsibility of) the designated agent. All such incidents will require a PAEMS Incident Report.

Disposal of Controlled Substances

All unused controlled substances must be wasted and disposed in accordance with the proper system protocols.

Unused controlled substances will be wasted only in the presence of a witness, i.e. nurse, physician, or agency staff member. Furthermore all drug containers, vials, syringes etc. must be properly disposed of in a proper biohazard container, also in the presence of a witness.

In the event not all of the controlled substance is administered to a patient, the remainder will be slowly expelled into an absorbent material. All waste must be documented on the PAEMS Controlled Substance Usage Log. A witness must observe the waste and sign attesting to the disposal.

When a controlled substance has been discovered as outdated from either the safe or the box, it must be secured and delivered to the designated agent for disposal. Upon wasting medications, DEA Form 41 is to be completed and filed. Expired medication wasting requires two (2) witness signatures. The actual medication will be disposed of in an approved absorbent material (i.e. Deterra®, or similar commercial product) which does not allow the medication to be reconstituted. The vial/ampule must be discarded in a sharps container. For controlled substances that have been discovered damaged from either the safe or a box, it must be disposed of in a sharps container after reporting the item to the designated agent. The designated agent will confirm the waste and document the disposal on the DEA Form 106. Immediate notification of Medical Director must be made in the event a DEA Form 106 is needed/used.

Agency Audit


Each agency is required to do a monthly audit on their controlled substances. Monthly audits are to be submitted to the PAEMS Office no later than the last Tuesday of the month. Audits will consist of completion of the Peoria Area EMS Agency Controlled Substance Audit Form, providing copies of PAEMS Controlled Substance Restock and Accountability Forms, PAEMS Controlled Substance Box Location Forms, DEA Form 41 (if applicable), and DEA Form 106 (if applicable).

PAEMS Audit

Each agency that stocks controlled substances will be subject to audits performed by PAEMS personnel. The agency will be contacted at least three (3) business days prior to an audit. An audit will consist of an inventory of all controlled medications that the agency possesses. This includes medications that are locked in the par level safes as well as any medications that are in service on response vehicles. During the time of the audit all medications will be checked. It is up to the agency to assist the PAEMS personnel in this audit. PAEMS personnel may ask that "in service vehicles" be brought to a specific location or provide access to PAEMS personnel at their designated location i.e. fire station, ambulance station, posting location. A PAEMS audit form will be completed in its entirety and signed by PAEMS personnel and agency designee at the time of the audit. The audit will also include checking of order forms, 222 forms, and DEA forms 41 and 106 (if applicable) and proper, up-to-date, state and federal DEA Licenses. Audit paperwork will be filed at the PAEMS Office once completed. In the event an audit finds any discrepancy, the PAEMS System Medical Director will be notified, as well as the DEA and an immediate investigation will be started.

DEA licenses

The State controlled substance and Federal DEA licenses permit the agency to house controlled substances on site for the purpose of restocking medications. These licenses are specific for the site where controlled substances are housed, and shall be kept with the restock safe. The Medical Director (as the registrant), has full authority over the license. The agency is responsible for all fees associated with obtaining and renewing these licenses, unless the agency is considered "owned" by a governmental authority (federal, state, county, or municipal government), in which case the Federal DEA licensing fee is waived. Should an agency fail to renew the controlled substance license, controlled substances will be relinquished to PAEMS personnel.

	Peoria Area EMS System Prehospital Care Manual	Policies Section	Page
Effective Oct 1, 2021	Medical Disaster and System Wide Crisis Policy		38

EMS agencies are expected to notify Medical Control in the event of a potential or actual “Medical Disaster”

A “Medical Disaster” is defined as:

MCI involving 10+ patients

WMD Incident

60+ minute extrication time

“Natural or Man Made Disaster” with multiple transported patients

HAZMAT scene where 1 or more patients are transported to a local hospital

Follow the Communications Policy to notify OSF Medical Control.

The **Region 2 Medical Response Team (RMERT)** is a deployable 20 bed critical and 100 bed non critical emergency treatment facility. The team consists of doctors, RN’s, and Paramedics and may be utilized for any type of medical disaster. Contact OSF Communications at (309)655-5714. In most cases RMERT can be deployed within an hour. If a trend is recognized in numbers and types of patients with similar complaints from a single incident or multiple incidents in a short timeframe the EMS agency shall contact IEMA Illinois Emergency Management Agency Command Center at (800)782-7860 and consult them as to the possibility of a System wide crisis. The Agency shall then contact OSF Medical Control (309)655-6770 and PAEMS System office at (309)655-2113.

DUODOTE Protocol: IDPH requires that each EMS System within the state of Illinois adopt the DuoDote nerve agent protocol for all levels of pre hospital care if the agency carries the medication or if it arrives on scene brought by others. DuoDote kits include two auto-injectors. Atropine-2mg and 2PAM-600mg which are not to be utilized prophylactically but only when S/S of nerve agent exposure. Given similar to Epi auto injector in the lateral aspect of the Quadriceps muscle.

Mild to Moderate Acetylcholinesterase Inhibitor Agent Exposure

Patient (Weight)	Atropine Dose IM or via Auto-injector	Pralidoxime Chloride Dose IM or via 600 mg Auto-injector
Infant: 0-2 years	0.05 mg/kg IM or via auto-injector (e.g. 0.25 mg and/or 0.5 mg auto-injector)	15 mg/kg IM
Child: 3-7 yo (13-25 kg)	1 mg IM or via auto-injector (e.g. one 1 mg auto-injector or two 0.5 mg auto-injectors)	15 mg/kg IM OR One auto-injector (600 mg)
Child: 8-14 yo (26-50 kg)	2 mg IM or via auto-injector (e.g. one 2 mg auto-injector or two 1 mg auto-injectors)	15 mg/kg IM OR One auto-injector (600 mg)
Adolescent/ Adult	2-4 mg IM or via auto-injector	600 mg IM OR One auto-injector (600 mg)
Pregnant Women	2-4 mg IM or via auto-injector	600 mg IM OR One auto-injector (600 mg)
Geriatric/ Frail	2 mg IM or via auto-injector	10 mg/kg IM OR One auto-injector (600 mg)

Severe exposures require doubling the dosages of both medications through 14yo and the elderly.

Adolescents and Adults shall receive 3 DuoDote kits or 6mg Atropine + 1800mg 2PAM.

Trick to remember Mnemonic

Signs of Organophosphate poisoning:

“DUMB BELLS”

D - Diarrhoea

U - Urination

M - Miosis

B - Bradycardia

B - Bronchorrhea

E - Emesis

L - Lacrimation

S - Salivation

	Peoria Area EMS System Prehospital Care Manual	Policies Section	Page
Effective Oct 1, 2021	Suspected Human Trafficking Policy		39

Human Trafficking: The recruitment, harboring, transportation, provision or obtaining of a person for labor or services through the use of force, fraud, or coercion for the subjection to involuntary servitude, peonage, debt bondage, or slavery.

Identifying victims and reporting suspected cases of Human Trafficking

You may have encountered a victim of human trafficking in the course of your duties. Illinois ranks in the top 10 states for reported HT cases with Central Illinois holding 80% of reported cases. It is important to recognize that HT victims can be any age, race, gender, and nationality including US citizens, and may be found in legitimate and illegitimate labor environments. Many are lured with false promises of well-paying jobs or love, and are forced into domestic servitude, manual labor, other types of forced labor, or commercial sex (prostitution). Traffickers typically prey on vulnerable populations who may have little or no social support network. Economic hardship, social instability, violence, homelessness, and run-a-ways, & displaced due to natural disasters and political instability are common.

There are multiple indicators that a person may be a victim of trafficking listed below are some but not all.

Labor or Service: The person (victim)

Recruited for 1 purpose and forced into some other job. Forced to relinquish their salary to pay off debts. Forced to perform sex acts or is a juvenile engaged in commercial sex. Works long or unusual hours. Inadequately dressed or ill prepared for the work they do.

Control Indicators: The person (victim)

Is not in possession of their own ID or travel documents. Appears to be coached on what to say. Has been threatened or their family threatened by harm. Is passive, timid, or submissive. Has been threatened with deportation or law enforcement actions. Appears confused, afraid, or shows signs of physical/mental abuse. Unable to freely socialize or contact friends or family.

Living Condition Indicators: The person (victim)

Lacks personal possessions or an unstable living environment. Has no freedom of movement or unreasonable security measures like bars on windows and locks on interior doors. Lives in an unsuitable environment and/or deprived of basic needs (food, water, sleep, medical care).

Travel Indicators: The person (Victim)

Does not know their destination or how they got here. Does not know who they are meeting or traveling with someone they do not know or is not their parent or guardian.

Medical Indicators: (The person (Victim)

Has poorly explained scars, injuries, or infections. Has unexplained multiple tattoos (Branding). Is being prevented from revealing their medical history. IS suffering from urinary issues, rectal or sexual organ injuries. Is being treated for chronic/ recurrent back or abdominal pain. Has untreated poor eyesight, dental issues, or hearing problems. Appears malnourished.

Know the signs above. Render the appropriate care for their chief complaint based upon the appropriate protocol(s).


The patient should be separated from others during transport. If medical care is refused or not needed and an immediate threat is suspected contact law enforcement. Discretely offer a DCP “Dream Center of Peoria” card.

Contact Homeland Security Investigation tip-line (866)347-2423 or online at www.ice.gov/tips.

Contact **National Human Trafficking Resource Ctr** (888)373-7888. This agency is not law enforcement but can help with resources, information, and assistance to help those in need.

These lines are staffed 24/7/365

Other resources: www.dreamcenterpeoria.org, www.a21.org, www.dhs.gov/bluecampaign

	Peoria Area EMS System Prehospital Care Manual	Policies Section	Page
Effective Oct 1, 2021	Domestic and Elder Abuse Policy		40

Illinois law establishes requirements that any person licensed, certified or otherwise authorized to provide healthcare shall offer immediate and adequate information regarding services available to abuse and neglect victims.

Abuse is defined as physical, mental or sexual injury to (a child or) eligible adult. An eligible domestic partner is defined as a spouse or person who resides in a domestic living situation with another individual suspected of abuse. EMS personnel should not rely on another mandated reporter to file a report on the victim's behalf.

First Responder Care, BLS Care, ILS Care, ALS Care

Care should be directed at conducting a thorough patient assessment, initiating routine patient care to assure that the patient has a patent airway, is breathing and has a perfusing pulse as well as beginning treatment for shock and preparing the patient for or providing transport.


Reporting Methods

The following telephone numbers regarding services available to victims of abuse shall be offered to all victims of abuse whether they are treated & transported or if they refuse treatment & transport to the hospital:

Elderly Abuse Hotline (800)559-7233

Center for Prevention of Abuse (309)691-0551

Crime Victims Compensation Program (800)228-3368


	Peoria Area EMS System Prehospital Care Manual	Policies Section	Page
Effective Oct 1, 2021	Rape/ Sexual Assault Policy		41

Rape and sexual assault are acts of violence and may be associated with traumatic injuries, both external and internal. A thorough assessment of the patient's condition should be done and special attention should be given to the patient's mental health needs as well.

Care should be directed at conducting a thorough patient assessment, initiating routine patient care to assure that the patient has a patent airway, is breathing and has a perfusing pulse as well as beginning treatment for shock and preparing the patient for or providing transport.


- Strongly discourage the patient from urinating, washing/showering or changing clothes.
 - Collaborate with police to determine what articles (*i.e.* clothing) will be transported with the patient.
 - **Do not** physically examine the genital area unless there are obvious injuries that require treatment.
 - All linen used by the patient should be left with the patient in the Emergency Department.
2. Transport the patient to a facility with SANE (Sexual Assault Nurse Examiner) nurses and notify law enforcement of patient destination.
 3. The following information / telephone numbers regarding services available to victims of abuse shall be offered to all victims of abuse, whether they are treated & transported or if they refuse treatment & transport to the hospital:
 - Center for Prevention of Abuse (309) 691-0551
 - Crime Victims Compensation Program (312) 814-2581

The use of drugs to facilitate a sexual assault is occurring with increasing frequency. These drugs can render a person unconscious or weaken the person to the point that they cannot resist their attacker. Some of the drugs can also cause amnesia and the patient will have no memory of the assault. Date rape drugs have a rapid onset and varying duration of effect. It is important for prehospital personnel to be aware of these agents as well as their effects.

	Peoria Area EMS System Prehospital Care Manual	Policies Section	Page
Effective Oct 1, 2021	Critical Incident Stress Management Policy		42

There are certain emergencies that may have a lasting emotional effect on EMS personnel. These include emergencies involving children, co-workers, and familiar or particularly close persons, multiple death situations and disaster incidents. **The Heart of Illinois Critical Incident Stress Management Team** is an important resource in assisting EMS personnel in coping with stressful experiences.

1. EMS providers of the Peoria Area EMS System involved in an unusually stressful incident can contact the Heart of Illinois Critical Incident Stress Management Team.
2. The CISM Team members have specialized training in providing pre-incident education, on-scene support services, defusing, demobilization, formal debriefings, one-on-one debriefings, follow-up services and specialty briefings.
3. Debriefings and stress management services are most effective when conducted within 72 hours of the incident.
4. The CISM Team Coordinator may be reached by contacting Medical Communications at OSF Saint Francis Medical Center at (309) 655-2564.

	Peoria Area EMS System Prehospital Care Manual	Policies Section	Page
Effective Oct 1, 2021	Region 2 School Bus Accident Policy		43

Incidents involving school buses pose unique challenges to the EMS provider in assuring proper release of uninjured children. Once Medical Control confirms that the minor children are not injured, the custody and responsibility for these children will remain with the responding EMS provider until the children are transferred to parents, legal guardians, school officials or the hospital. If no procedure exists to have children transferred to a parent, legal guardian or school official, then these children will need to be transported to the hospital.

On arrival at the scene, EMS personnel shall determine the category of the incident and request appropriate resources. EMS must also accomplish a complete assessment of the scene to include at least:

- Mechanism of injury
- Number of patients
- Damage to the vehicle
- Triage as outlined in the System Plan

Once this has been accomplished, then the patients may be assigned to one of the following categories:

CATEGORY A: Significant mechanism of injury (i.e. rollover, high-speed impact, intrusion into the bus, etc.) – school bus occupancy indicates that at least one child may reasonably be expected to have significant injuries or significant injury is present in one or more children. *All children in this category must be transferred to an appropriate hospital unless a Peoria Area EMS System refusal form is signed by a parent or legal guardian.*


CATEGORY B: Suspicious mechanism of injury (i.e. speed of impact, some intrusion into the bus, etc.) – school bus occupancy indicates that at least one child may reasonably be expected to have minor injuries or minor injury in one or more children exists with no obvious mechanism of injury that could reasonably be expected to cause significant injuries. *EMS personnel must complete the EMS Multiple Casualty Release Form and secure a signature of an appropriate school official.*

CATEGORY C: No obvious mechanism of injury – school bus occupancy indicates no injuries may be present and that the release of uninjured children may be the only EMS need. No injuries are found to be present in any of the children. *EMS personnel must complete the EMS Multiple Casualty Release Form and secure a signature of an appropriate school official.*

CATEGORY D: If the pediatric patient(s) have **special healthcare needs** and/or communication difficulties, then all of these patients must be transported to the hospital for evaluation unless approval for release is received from Medical Control or a parent/legal guardian has signed the approved refusal form.

1. After determining the category of the incident, EMS personnel shall determine the extent of EMS involvement and **contact Medical Control**.
2. Adults, victims 18 years and older, and occupants of other vehicles will be treated or released in accordance with routine System operating procedures.
3. If Medical Control has approved usage of this policy/plan, then each provider will implement their procedure for contacting parents, legal guardians or appropriate school officials to receive custody of uninjured children.
4. The approved system *Multiple Casualty Release Form* for school bus incidents must be utilized for all children who will not be transported.

5. Each child transported must have a completed run report.
6. One run report indicating the nature of the incident, etc. shall be completed and must include all information regarding the incident including the number of patients released. Keep a copy of this report with the release form or with refusal forms signed by the parents.
7. A parent, legal guardian or appropriate school official must be given a copy of the refusal/release form.
8. Any parent or legal guardian who arrives on scene to remove and assume responsibility for their child must sign an individual refusal form.
9. EMS providers shall use reasonable means to contact the parents or school officials. Once the identity and authority of the parent, legal guardian or school official has been established, the EMS provider may release the child to that individual or alternate transport source. School officials will follow their established program for informing parents or legal guardians regarding the incident.
10. The health and safety of the child is the primary concern. It is the responsibility of the EMS provider to assure that the child is returned to the parent or placed on the school's alternate transport vehicle. If the EMS provider on scene determines a child should receive a physician evaluation or be offered medical care, the child **will be transported** to the hospital unless a parent or legal guardian is on scene and consents to refusal.
11. Each prehospital provider agency in the Peoria Area EMS System who may likely respond to a school bus incident must contact the school superintendents in their district to obtain the name and title of the "appropriate school official" who may take responsibility for the child on the bus involved in the incident.
12. Copies of documentation must be forwarded to the EMS Office (Quality Assurance Coordinator) for review within 24 hours of utilization of this policy.

	Peoria Area EMS System Prehospital Care Manual	Policy Section	Page
Effective Oct 1, 2021	12 Lead Policy		45

Early identification of cardiac infarction is crucial. The benefits of PCI are time-dependent and the 12-Lead EKG may provide early recognition of acute myocardial infarction (AMI).

Indications for a 12-Lead EKG include (but are not limited to):

- Chest pain / discomfort
- Epigastric pain
- Shortness of breath
- Syncope (or near-syncope)
- Pulmonary edema / Cardiogenic shock
- Wide complex tachycardia
- Symptomatic bradycardia
- Stroke
- Altered level of consciousness (ALOC)
- Vague “unwell” symptoms in diabetic and elderly patients.

Upon determining that a patient has a complaint or symptoms that indicate performing a 12-Lead:

1. Initiate *Routine ALS Care* and **obtain 12-Lead EKG as soon as possible**.
2. Transmit the EKG via **TWIAGE** or Zoll monitor and **contact the receiving hospital** as soon as possible.
3. **Contact Medical Control** for consultation/orders when needed.
4. Upon arrival at the emergency department, a copy of the 12-Lead EKG should be given to the accepting nurse with request for physician review as soon as possible.
5. Copies of the 12-Lead EKG must be included with the patient care record.

Critical Thinking Elements

- Communicate ST elevation MI (STEMI) early in the report to the receiving hospital or Medical Control. (STEMI Alert).
- Communicate acute stroke / suspected stroke early in the report to the receiving hospital or Medical Control (Stroke Alert).



OSF
HEALTHCARE

Peoria Area EMS System Prehospital Care Manual

Procedures
Section


Page

Effective Oct 1, 2021

Procedures Title Page

46

PAEMS Procedures Section

	Peoria Area EMS System Prehospital Care Manual	Procedures Section	Page
Effective Oct 1, 2021	Pain Control Procedure		47

First Responder and BLS Care should focus on the reduction of the patient’s anxiety due to the pain.

1. Render initial care in accordance with the *Universal Patient Care Protocol*.
2. Assess level of pain using the *Pain Assessment Scale (0-10)* or the *Wong-Baker Faces Pain Rating Scale*.
3. Place patient in a position of comfort.
4. Reassure the patient.
5. Consider ice or splinting.
6. Reassess level of pain using the approved pain scale.
7. Initiate ALS intercept, if indicated.

ILS/ ALS Care should focus on the reduction of the patient’s anxiety due to the pain.

1. Continue care following the procedures found in EMR and BLS Care.
2. Patient care according to Protocol based on specific complaint.
3. Pain severity ≥ 6 out of 10 or indication for IV/IM/IN pain medication.
4. If the medical or trauma patient is **hemodynamically stable** the provider should manage patient’s pain by using the following medication.

Fentanyl IV/IO	50 mcg IV, over <u>2 minutes</u> for pain. Fentanyl 50 mcg IV or IO may be repeated every 5 minutes to a total of 200 mcg.
Fentanyl IM/IN	<p>If unable to establish IV access, may administer Fentanyl 50 mcg IM. May be repeated as needed to a total of 200 mcg.</p> <p>If unable to establish IV/ IO access, may administer 2mcg/kg IN + 0.1ml dead space volume for waste within the MAD (See dosing chart for IN dosages)</p>

ALS Trauma Care should focus on the reduction of the patient’s anxiety and distress due to pain caused from a traumatic injury. **Ketamine** may be utilized as an analgesia when the patient is showing signs of hypo perfusion due to a traumatic injury. **Ketamine** has limited effects upon respiratory drive and blood pressure which make it an ideal analgesic for traumatic injuries where hypo perfusion is noted. **Indications**-Acute musculoskeletal traumatic injuries (eg. fractures, dislocations, lacerations, and burns), Penetrating traumatic injuries (eg. gunshot wounds, stab wounds, and impaled objects)

1. If the patient is **hemodynamically unstable** due to traumatic injury the provider should manage the patient’s pain by using the following medication.

Ketamine IV/IO	0.3mg/kg slow IV/IO Push every 20 minutes to a maximum 3 doses
Ketamine IM	0.5mg/kg slow IM Push





Effective Oct 1, 2021

Pain Control Dosing Chart

49


Intranasal Versed (Midazolam) Dosing Chart

Patient Age (years)	Weight	5mg/5mL Concentration		10mg/2mL Concentration	
		Dose (mg)	Dose (mL)	Dose (mg)	Dose (mL)
Neonate	3kg (6)Lbs	0.6 mg	0.7 ml	0.6 mg	0.3 mL
<1 yr	6kg (13) Lbs	1.2 mg	1.3 ml	1.2 mg	0.4 mL
1	10kg (22) Lbs	2.0 mg	2.1 ml	2.0 mg	0.5 mL
2	14kg (30) Lbs	2.8 mg	2.9 ml	2.8 mg	0.7 mL
3	16kg (35) Lbs	3.2 mg	3.3 ml	3.2 mg	0.8 mL
4	18kg (40) Lbs	3.6 mg	3.8 ml	3.6 mg	0.9 mL
5	20kg (44) Lbs	4.0 mg	4.1 ml	4.0 mg	1.0 mL
6	22kg (48) Lbs	4.4 mg	4.5 ml	4.4 mg	1.0 mL
7	24kg (53) Lbs	4.8 mg	4.9 ml	4.8 mg	1.1 mL
8	26kg (57) Lbs	5.2 mg	5.3 ml	5.2 mg	1.2 mL
9	28kg (62) Lbs	5.6 mg	5.7 ml	5.6 mg	1.3 mL
10	30kg (66) Lbs	6.0 mg	6.1 ml	6.0 mg	1.4 mL
11	32kg (70) Lbs	6.4 mg	6.5 ml	6.4 mg	1.4 mL
12	34kg (75) Lbs	6.8 mg	6.9 ml	6.8 mg	1.5 mL
Small Teenager	40kg (88) Lbs	8.0 mg	8.1 ml	8.0 mg	1.8 mL
Full Grown Teen or Adult	>50kg (>110) Lbs	10.0 mg	10.1 ml	10.0 mg	2.0 mL

For Children: Total weight (kg) X 0.2 mg = total mg dose of Midazolam, maximum dose of 10 mg

*Volume is based on the calculated dose PLUS 0.10 mL dead space in the device. The total volume is then rounded off to the next highest 0.1 mL. In some children a higher dose may be needed (0.3 mg/kg).

Intranasal Fentanyl Dosing Chart		
Patient Weight	Dosage (2mcg/kg)	Dead Space Volume
3-5kg (6-11 Lbs)	10 mcg (0.2 ml)	(+ 0.1 ml)
6-10kg (13-22 Lbs)	20 mcg (0.4 ml)	(+ 0.1 ml)
11-15kg (24-33 Lbs)	30 mcg (0.6 ml)	(+ 0.1 ml)
16-20kg (35-44 Lbs)	40 mcg (0.8 ml)	(+ 0.1 ml)
21-25kg (46-55 Lbs)	50 mcg (1.0 ml)	(+ 0.1 ml)
26-30kg (57-66 Lbs)	60 mcg (1.2 ml)	(+ 0.1 ml)
31-35kg (68-77 Lbs)	70 mcg (1.4 ml)	(+ 0.1 ml)
36-40kg (79-88 Lbs)	80 mcg (1.6 ml)	(+ 0.1 ml)
41-45kg (90-99 Lbs)	90 mcg (1.8 ml)	(+ 0.1 ml)
46-50kg (101-110 Lbs)	100 mcg (2.0 ml)	No Extra
51-55kg (112-121 Lbs)	110 mcg (2.2 ml)	**(+ 0.1 ml)**
56-60kg (123-132 Lbs)	120 mcg (2.4 ml)	**(+ 0.1 ml)**
61-70kg (134-154 Lbs)	140 mcg (2.8 ml)	**(+ 0.1 ml)**
71-80kg (156-176 Lbs)	160 mcg (3.2 ml)	**(+ 0.1 ml)**
81-90kg (178-198 Lbs)	180 mcg (3.6 ml)	**(+ 0.1 ml)**
91-100kg (200-220 Lbs)	200 mcg (4.0 ml)	No Extra
		Divide dose in 1/2 and administer 10 minutes apart to reduce runoff

	Peoria Area EMS System Prehospital Care Manual	Procedures Section	Page
Effective Oct 1, 2021	Basic Airway Control Procedure		51

Establishing and maintaining an open airway and assuring adequate ventilation is a treatment priority with all patients.

1. Assure an open airway by utilizing either the head tilt/chin lift maneuver, the modified jaw thrust maneuver or the tongue-jaw lift maneuver. The head tilt/chin lift maneuver is NOT to be used if there is any possibility of cervical spine injury.
2. Expose the chest and visualize for chest rise and movement, simultaneously listen and feel for air movement at the mouth and nose. This procedure will need to be done initially and after correcting an obstruction and securing the airway.
3. If the chest is not rising and air exchange cannot be heard or felt:
 - a) Deliver two positive-pressure ventilations. If resistance continues, follow AHA sequences for obstructed airway rescue.
 - b) Reassess breathing and check for a carotid pulse.
 - c) If spontaneous respirations return and a pulse is present, provide supplemental Oxygen by non-rebreather mask or assist respirations with bag-valve mask (BVM) at 15 L/min.
 - d) If the patient remains breathless and a pulse is present, initiate ventilations with a BVM at 15 L/min at a rate of 12 breaths per minute.
 - e) If the patient remains breathless and a pulse is not present, initiate CPR and institute the appropriate cardiac protocol.
4. If the patient presents with stridor, “noisy breathing” or snoring respirations, render treatment for partial airway obstruction in accordance with AHA guidelines.
 - a) Reassess effectiveness of the airway maneuver.
 - b) If initially unable to resolve partial airway obstruction, suction the airway and visualize the pharynx for any evidence of foreign objects. If the object is visible utilize the appropriate method to retrieve.
 - c) If partial airway obstruction persists, treat according to AHA guidelines for resolving a complete airway obstruction.
5. Once the obstruction has been corrected assess the airway and utilize an appropriate airway adjunct. For your level of care and observe for adequate chest rise and fall.
6. Supplemental oxygen should be delivered to any patient who exhibits signs of difficulty breathing, sensation of shortness of breath, respiratory rate > 20 breaths per minute, use of accessory muscles, altered level of consciousness/altered mental status, cyanosis, cardiac symptoms, head injury or any indications of shock.
7. Bag-valve mask ventilation with supplemental oxygen at 15 L/min should be initiated at the rate of 12/min if respirations are absent, there is evidence of inadequate ventilation, respiratory rate is < 8/min, absent or diminished breath sounds or wounds to the chest wall.

Contraindications and Procedure for the use of an i-gel

- Active gag reflex
- Ingestion of a caustic substance (*e.g.* gasoline, drain cleaner, etc.)
- Use caution with pregnant patients.
- Morbidly obese
- Tracheostomy (will be ineffective with esophageal placement)

1. Apply proper BSI including face shield and/ or N95 mask
2. Open the **i-gel** package, and on a flat surface take out the protective cradle containing the device.
3. In the final minute of pre-oxygenation, remove the **i-gel** and transfer it to the palm of the same hand that is holding the protective cradle, supporting the device between the thumb and index finger. Place a small bolus of a water-based lubricant, such as K-Y Jelly, onto the middle of the smooth surface of the cradle in preparation for lubrication. Do not use silicone based lubricants.
4. Grasp the **i-gel** with the opposite (free) hand along the integral bite block and lubricate the back, sides and front of the cuff with a thin layer of lubricant. This process may be repeated if lubrication is not adequate, but after lubrication has been completed, check that no BOLUS of lubricant remains in the bowl of the cuff or elsewhere on the device. Avoid touching the cuff of the device with your hands.
5. Place the **i-gel** back into the cradle in preparation for insertion.

The i-gel must always be separated from the cradle prior to insertion. The cradle is not an introducer and must never be inserted into the patient's mouth.

i-gel Size	1	1.5	2	2.5	3	4	5
Patient Criteria	2-5kg ILS and ALS only	5-12kg ILS and ALS only	10 - 25kg ILS and ALS only	25 - 35kg ILS and ALS only	30 - 60kg (Based On Ideal Body Weight)	50 - 90kg (Based On Ideal Body Weight)	90 + kg (Based On Ideal Body Weight)
Patient Size	Neonate ALS Only	Infant ALS Only	Toddler ALS Only	Child ALS Only	Small Adult	Medium Adult	Large Adult

Make sure the appropriate size of **i-gel** has been prepared prior to insertion. Always have a smaller and/or larger size of the **i-gel** readily available. Adequate preparation, proper lubrication of the device and correct positioning of the head and neck with optimum mouth opening is the key to a successful insertion of **i-gel**. Always pre-oxygenate.

WARNING: The i-gel is supplied in a protective cradle or cage pack to ensure the device is retained in the correct flexion prior to use and also acts as a base for lubrication. The i-gel must always be separated from the cradle or cage pack prior to insertion. The cradle and cage pack are not introducers and must never be inserted into the patient's mouth.


A proficient user can achieve insertion of the **i-gel** in less than 5 seconds.

1. Grasp the lubricated **i-gel** firmly along the integral bite block. Position the device so that the **i-gel** cuff outlet is facing towards the chin of the patient.
2. The patient should be in the sniffing position with head extended and neck flexed. The chin should be gently pressed down before proceeding to insert the **i-gel**.
3. Introduce the leading soft tip into the mouth of the patient in a direction towards the hard palate.
4. Glide the device downwards and backwards along the hard palate with a continuous but gentle push until a definitive resistance is felt.

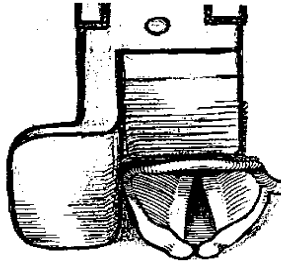
WARNING: Do not apply excessive force on the device during insertion. It is not necessary to insert fingers or thumbs into the patient's mouth during the process of inserting the device.

5. At this point the tip of the airway should be located into the upper esophageal opening and the cuff should be located against the laryngeal framework. The incisors should be resting on the integral bite-block.

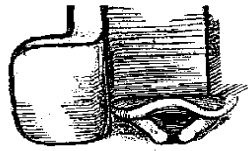
WARNING: In order to avoid the possibility of the device moving up out of position prior to being secured in place, it is essential that as soon as insertion has been successfully completed, the i-gel is held in the correct position until the device is secured in place.

	Peoria Area EMS System Prehospital Care Manual	Procedures	Page
Effective Oct 1, 2021	Advanced Airway Control Procedure		54

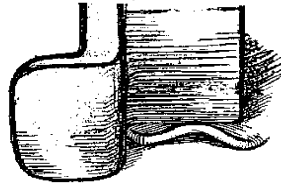
1. Implement basic airway measures in accordance with the *Basic Airway Control Procedure*.
2. **Conduct a pre-intubation assessment** using the *Cormack-Lehane* scale:



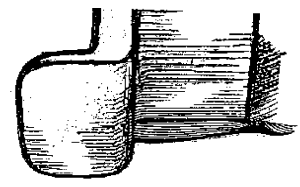
GRADE 1



GRADE 2



GRADE 3



GRADE 4

If the pre-intubation assessment is **GRADE 3** or **GRADE 4**, do not attempt intubation. Proceed to insertion of King LTS-D Airway or return to basic airway control measures using a BVM with OPA or NPA.

3. Consider using a Bougie (See Endotracheal Tube Introducer Procedure)
4. Select the proper tube size (based on patient size) and attach a 10mL syringe. Inflate the cuff to be sure it does not leak (the cuff must be deflated prior to insertion).
5. Have suction, BVM, stethoscope, colormetric end-tidal CO₂ detector/capnography and commercial ETT holder readily available.
6. Suction the pharynx, lubricate the tube, and pre-oxygenate the patient.
7. Insert the blade into the mouth on the right side, moving the tongue to the left. Follow the natural contour of the pharynx, lifting the tongue (not prying) until you can see the glottic opening.
 - a) If you are using a **straight blade** (Miller), insert it until you can see the epiglottis. With the tip of the blade, lift up on the epiglottis so that you can visualize the vocal cords and glottic opening. If needed, have someone gently press down on the cricoid cartilage (Sellick Maneuver) so that you can see the cords well.
 - b) If you are using a **curved blade** (Macintosh), insert the tip into the vallecula and lift up. This will lift the epiglottis and expose the vocal cords and glottic opening. If needed, have someone gently press down on the cricoid cartilage (Sellick Maneuver) so that you can see the cords well.
8. After visualizing the glottic opening, grasp the ETT with your right hand and advance the tube from the right corner of the mouth. Insert the tube into the glottic opening between the vocal cords, just far enough to pass the cuff of the tube past the opening.
9. Verify proper position by ventilating the patient through the tube with a bag-valve device while listening to each side of the chest with a stethoscope to be sure air is entering both lungs. Also, check for inadvertent esophageal intubation by listening for air movement in the epigastric area during ventilations.
10. Utilize end-tidal CO₂ (ETCO₂) or capnography.

11. If breath sounds are heard on both sides of the chest, no epigastric sounds are heard colorimetric ETCO₂ detector/capnography indicate proper placement, inflate the cuff with 10mL of air and secure the tube with a commercial ETT holder.
 - a) If you have inserted the ETT too far, it will usually go into the right main stem bronchus. Therefore, if you hear breath sounds only on the right, you should pull the tube back ½ inch at a time until you hear bilateral breath sounds. Inflate the cuff with 10mL of air and secure the ETT with a commercial holder.
 - b) If you hear no breath sounds, you are in the esophagus and must remove the ETT immediately. Ventilate patient and proceed to King LTS-D Airway insertion or continue basic airway control measures.
12. Frequently reassess breath sounds to be sure that the ETT is still in place.
13. Ventilate the patient at a rate of 12 times per minute.
14. If intubation is unsuccessful after one (1) attempt, refer to the *BIAD Airway Procedure* or *Basic Airway Control Procedure*.


Trauma Patients:

Any type of airway manipulation may be dangerous during airway control of the suspected spinal injury patient. Maintain in-line stabilization and refer to the *BLS Airway Procedure* or *Advanced Airway procedure*.

1. A minimum of two (2) trained rescuers is needed to assure special attention to spinal precautions.
2. One rescuer will apply manual in-line stabilization by placing the rescuers hands about the patient's ears with the little fingers under the occipital skull and the thumbs on the face over the maxillary sinuses.
3. The rescuer performing airway placement should be at the head.
4. Maintain the patient's head in a neutral position and place the BIAD or ET Tube without cervical manipulation.

Critical Thinking Elements

- The definition of an "attempt" is actually trying to pass the ET tube through the vocal chords.
- Verification of proper ETT placement is of vital importance. Utilize multiple methods of verifying placement including direct visualization of the ETT passing through the cords, auscultation of bilateral breath sounds, absence of epigastric sounds during ventilation, and positive color change (purple to yellow) with ETCO₂ or capnography levels between 35-45mmHg. Document findings.

	Peoria Area EMS System Prehospital Care Manual	Procedures	Page
Effective Oct 1, 2021	Advanced Airway Expanded Scope Only		56

Surgical Airway Procedure (ALS Advanced Practice Only) for percutaneous procedure, see Melker kit

INDICATIONS:

Surgical Cricothyroidotomy is an emergent procedure for patient > 12 years of age who are in need of emergent airway support, but cannot be intubated due to anatomic or traumatic distortion of the airway, or who have an upper airway obstruction that precludes successful endotracheal intubation. Indications may include any of the following:

- Upper airway obstruction due to edema, infection, caustic ingestion, allergic reaction, inhalation injuries or foreign body.
- Maxillofacial Trauma
- Unsuccessful tracheal intubation

CONTRAINDICATIONS:

Surgical Cricothyroidotomy should not be considered in the following situation:

- Crush injury to the larynx
- Penetrating neck trauma

RELATIVE CONTRAINDICATIONS:

- Known coagulopathy

EQUIPMENT:

- Personal protection equipment
- #11 Scalpel
- Betadine swabs
- 4x4 gauze pads
- Trach hook
- Syringe
- Endotracheal tube 5.5-6.0
- Endotracheal tube securing device
- Bag-valve-mask
- Oxygen source

PROCEDURE:

1. Attempt to oxygenate patient with 100% oxygen while equipment is assembled.
2. Maintain neutrality of the cervical spine.
3. Inflate endotracheal tube cuff and observe for any air leaks. Deflate cuff.
4. Identify the cricothyroid membrane just below the thyroid cartilage. Make a vertical skin incision over this area.
5. Stabilize the larynx with the non-operating hand. Do not let go.

6. Make a transverse incision the width of the cricothyroid space with the tip of the #11 blade scalpel.
7. As the airway is entered, a rush of air or bubbling is noted.
8. Dilate the incision (May be performed with a curved forceps or with handle of the scalpel).
9. Insert the endotracheal tube and inflate the cuff.
10. Confirm correct placement then secure the tube.
11. Ventilate the patient with Bag-valve-mask and 100% oxygen.
12. Documentation of the procedure should include:
 - Indications for the procedure
 - Number of attempts and by whom
 - Size of endotracheal tube utilized
 - Pulse oximetry, chest expansion, breath sounds, skin color, vital signs
 - Complications which may include:
 - Asphyxia
 - Subglottic stenosis/edema
 - Hemorrhage
 - Subcutaneous emphysema
 - Mediastinal emphysema
 - Creation of a false passage
 - Laryngeal stenosis
 - Laceration of the esophagus or trachea
 - Right main stem intubation

Rapid Sequence Induction/ Intubation (RSI) (ALS Advanced Practice Only) will be the preferred method for establishing a secure airway unless patient condition or circumstances dictate otherwise.

Procedure:

Step 1: PRE-OXYGENATE: Position the patient and pre-oxygenate with high flow oxygen by mask for 2-5 minutes. Do not manually ventilate the patient unless ventilatory assistance is needed; if so, use BVM to provide respiratory support.

Step 2: PREPARE: Assess for difficult airway and likelihood of difficulty with bag and mask ventilation. Have airway adjuncts and alternative airway readily available. If you anticipate difficulty with intubation or bag and mask ventilation call for help early and have a primary and secondary plan for airway management consider using video laryngoscopy initially. Assemble the required equipment and draw up the medications in labeled syringes. Ensure that the IV functions well. Continuously monitor the cardiac rhythm and pulse oximetry if conditions allow. Have immediately available an igel or BIAD, video laryngoscope, bougie, and the emergency cricothyrotomy kit.

Step 3: PRE-MEDICATION: Fentanyl 1-3 mcg/kg IV slowly over several minutes

SEDATION: May use 1 of the following:

Midazolam (Versed)	0.1-0.2mg/kg IV	
Ketamine	1-2mg/kg IV	Preferred agent for status asthmaticus
Etomidate	0.3mg/kg IV	Preferred for increased ICP-minimal CV effect

Continue pre-oxygenation for 2-3 minutes (allows medications to work) prior to Step 4, if time allows and the patient has effective respiratory effort/support.

- Consider removing the C-collar if present while providing in-line manual immobilization of the head and neck to aid intubation, also consider using video laryngoscopy as a first line in these patients.

Step 4: PARALYZE, then INTUBATE: Paralytic medications: (Choose 1 or the other)

Succinylcholine (Anectine) 1.5-2mg/kg IV

i. Succinylcholine contraindications include:

1. 5 days or more post-burn or major trauma
2. Patient with a history of chronic paralysis, malignant hyperthermia, known pseudocholinesterase deficiency, neuromuscular disorder (i.e. MS), acute spinal cord injury, or crush injury.
3. Known hyperkalemia, chronic renal failure or hemodialysis

Rocuronium (Zemuron) 1 mg/kg IV

- ii. Preferred agent for pediatric intubations unless known or predicted difficult airway
- iii. Preferred agent if known or suspected contraindications to Succinylcholine

- Apnea, jaw relaxation, and decreased resistance to bag/mask ventilations indicate that the patient is sufficiently relaxed to proceed with intubation.
- Intubate, verify tube placement, secure the tube, and continue to assist respirations.

Step 5: For CONTINUED NEUROMUSCULAR BLOCKADE after intubation, administer:

Rocuronium (Zemuron) 0.5-1.0 mg/kg IVP


For CONTINUED SEDATION: Continue with the sedation med utilized in Step 3

Midazolam (Versed)	0.05mg/kg	3-5mg for adults every 15-30 mins as needed
Ketamine	0.5-1.5mg/kg	Every 5- 10 minutes as needed
Fentanyl	1-3mcg/kg	Over 2 minutes

Step 6: UNSUCCESSFUL PLACEMENT: If endotracheal intubation is unsuccessful, and you are unable to ventilate the patient with BVM, consider attempting to gain airway control using one of the following techniques: (Refer to the Advanced Procedure Manual: Airway Procedures: Failed Airway Algorithm (510.010))

- a) Use a bougie see ET Tube Inducer Procedure
- b) Use video laryngoscope
- c) Place iGel see BIAD Igel Procedure
- d) Attempt placing bougie through iGel, and exchanging for ETT (only if iGel ineffective)
- e) Consider surgical airway if the above methods are unsuccessful

NOTE: If intubation is unsuccessful and additional paralytics are needed, a non-depolarizing agent should be considered after ease of bagging and airway back up has been carefully considered.


	Peoria Area EMS System Prehospital Care Manual	Procedures Section	Page
Effective Oct 1, 2021	Bougie/ OG Tube Procedure		60

Patient meets clinical indications for endotracheal intubation. Pre-intubation assessment predicts a difficult intubation. Studies have shown increased 1st time pass rate utilizing the Bougie.

1. See the Advanced Airway Control Procedure.
2. Slide the ET Tube over the Bougie allowing for a few inches at the tip to visualize the Bougie during insertion.
3. Introduce the Bougie with curved tip anteriorly and visualize the tip passing the vocal cords or above the arytenoids if the cords cannot be visualized.
4. Once inserted, gently advance the Bougie until you meet resistance or “hold-up” (if you do not meet resistance you have a probable esophageal intubation and insertion should be reattempted or manage the airway using a BIAD).
5. Withdraw the Bougie ONLY to a depth sufficient to allow passage of the ETT while maintaining proximal control of the Bougie.
6. Gently advance the loaded ET tube until you have passed through the vocal cords, thereby assuring tracheal placement and minimizing the risk of accidental displacement of the Bougie.
7. If you are unable to advance the ETT into the trachea and the Bougie and ETT are adequately lubricated, withdraw the ETT slightly and rotate the ETT 90 degrees COUNTER clockwise to turn the bevel of the ETT posteriorly. If this technique fails to facilitate passing of the ETT you may attempt direct laryngoscopy while advancing the ETT (this will require an assistant to maintain the position of the Bougie and, once the vocal cords are visualized, advance the ETT).
8. Once the ETT is correctly placed, hold the ET tube securely and remove the Bougie.
9. Confirm tracheal placement according to the intubation protocol, inflate the cuff with 3 to 10 cc of air, auscultate for equal breath sounds and reposition accordingly.
10. When final position is determined secure the ET tube, reassess breath sounds, apply end tidal CO₂ capnography monitor, and record and monitor readings to assure continued tracheal intubation.

Indication for orogastric (OG) tube placement in the Peoria Area EMS System is:

- Gastric decompression of an adult cardiac arrest patient after endotracheal intubation has been performed and placement verified; OR with use of the KING LTS-D Airway.
 - Known esophageal varices, esophageal stricture, esophageal or stomach cancer, esophagostomy or partial gastrectomy, gastric bypass, or penetrating neck trauma
1. Estimate the length of the tube needed to reach the stomach by measuring the tube from the corner of the mouth to the earlobe and down to the xiphoid process. Mark the length with tape.
 2. Lubricate the Salem sump tube (18F) with a water soluble lubricant (*e.g.* KY Jelly).
 3. Insert the tube through the oropharynx or through the gastric access lumen on the KING LTS-D Airway until the marked depth is reached.
 4. If the tube coils in the posterior pharynx, direct laryngoscopy can be utilized to place the tube in the esophagus.
 5. Verify placement by using a 60mL catheter tip syringe, instill 30mL of air into tube and auscultate over epigastrium for air sounds.
 6. Aspirate for gastric contents and assess for cloudy, green, tan, brown, bloody or off-white color contents consistent with gastric contents.
 7. Secure tube with tape.

	Peoria Area EMS System Prehospital Care Manual	Procedures Section	Page
Effective Oct 1, 2021	Intraosseous/ Jamshidi Procedure		61

The intraosseous space may be viewed as a non-collapsible, easily accessed space for any fluid or medication. Intraosseous infusion is preferred over endotracheal routes of medication administration and is a viable alternative when IV therapy is not available or not accessible. Intraosseous infusion is immediately available, safe and effective.

1. Intravenous fluids and medications are emergently needed, a peripheral IV cannot be established in two (2) attempts AND the patient demonstrates one of the following:
 - An altered mental status (GCS of 8 or less) with loss of protective airway reflexes (with notable exception of known diabetic with symptomatic hypoglycemia)
 - Clinical signs of shock from any cause (hypovolemia from severe dehydration or trauma, cardiogenic, anaphylactic, septic or Neurogenic) with a systolic BP less than 80mmHg
 - Patients in extremis (at risk of death or disability) with immediate need for delivery of medications and fluids (e.g. multi-system trauma, anaphylaxis, status asthmaticus, status epilepticus, life-threatening dysrhythmia or bradycardia, severe respiratory distress with hypoxia and/or alteration in consciousness, respiratory arrest, and overdose associated with alteration in vital signs, mental status and/or dysrhythmia)
 - If a patient is assessed to be in need of intraosseous access and does not fit any of the above, **contact Medical Control** for further guidance and orders.
2. EZ-IO insertion may be considered *PRIOR* to peripheral IV attempts if the patient is in cardiac arrest (medical or traumatic).

Contraindications:

1. Fracture of the bone selected for IO infusion (consider another approved site of insertion)
2. Excessive tissue at insertion site with absence of anatomical landmarks (consider another approved site of insertion)
3. Previous significant orthopedic procedures (i.e. prosthesis or hardware placement) (consider another approved site of insertion).
4. Infection at the site selected for insertion (consider another approved site of insertion)

Flow rates will be slower than achieved with intravenous (IV) access. To improve continuous infusion rates, use a pressure infusion bag (or BP cuff). Insertion of the EZ-IO in conscious patients or patients responsive to pain has been noted to cause mild to moderate discomfort comparable to the insertion of a large bore IV catheter. IO infusion, however, has been noted to cause severe discomfort.

Procedure:

1. Observe universal precautions.
2. Prepare the EZ-IO driver and needle set:
 - a) 15ga, 15mm long needle for patients weighing between 3kg and 39kg.
 - b) 15ga, 25mm long needle for patients weighing greater than 40kg.
 - c) 15ga. 45mm long needle for patients with excess tissue (optional).
3. Locate an appropriate insertion site. Approved sites include:
 - Proximal Tibia
 - Distal Tibia
 - Proximal Humerus
4. Prep the site with Betadine and set up infusion solution as for regular IV.

5. Stabilize site and insert appropriate needle set.
6. Remove EZ-IO driver from needle set while stabilizing catheter hub.
7. Remove stylet from the catheter; place stylet in EZ-IO shuttle or approved sharps container.
8. Attach 5-10mL syringe and aspirate bone marrow to confirm placement.
 - a) IO catheter should be at a 90 degree angle and firmly seated in the tibial bone.
 - b) Blood may be visible at the tip of the stylet.
 - c) The IO catheter should flush freely without difficulty or extravasation.
9. Connect the luer-lock equipped IV administration set.
10. For **conscious** patients (or for previously unresponsive patients who become conscious): **Lidocaine:** 30mg IO (slowly) to reduce discomfort from infusion. **0.5mg/kg for Pediatric Patients(Max 30mg).**
11. Flush the IO catheter with 10mL of normal saline.
12. Utilize a pressure bag for continuous infusions where applicable. If a pressure bag is not available, wrap a BP cuff around the bag of normal saline and inflate the cuff until desired flow rate is achieved.
13. Dress site, secure tubing and apply wristband as directed.
14. **If needed, further manage the patient’s pain by using one of the following medications.**

Fentanyl (ALS & ILS)	50 mcg IO, over <u>2 minutes</u> for pain. Fentanyl 50 mcg IO may be repeated every 5 minutes to a total of 200 mcg.
	May administer Fentanyl 50 mcg IM or IN. May be repeated as needed to a total of 200 mcg. (See dosing sheets for IN)


NOTE: The EZ-IO System is the preferred Pediatric device. However, this device can only be used on children greater than 3kg. For children < 3kg, refer to the below Jamshidi procedure.

The **Jamshidi** should be utilized on patients less than 3 kg and or less than 3 years of age.

1. Observe universal precautions.
2. Assemble and prepare equipment.
3. Locate landmarks of insertion site by palpating the anterior surface of the tibial bone 1-3 cm below the tibial tuberosity and slightly medial. Landmark for insertion must avoid the joint and epiphyseal plate.
4. Prep the site with Betadine and set up infusion solution as for regular IV.
5. With sterile technique, using a commercial IO (Jamshidi) needle, insert needle at a 90 degree angle and slightly 10-15 degrees inferior through the bone using firm downward pressure with a twisting motion. You should feel a “pop” when the needle goes into the medullary space.
6. Remove the inner stylet and attach a 5-10mL syringe. Aspirate for bone marrow contents, and then connect a conventional IV line with pressure infuser (or BP cuff).
7. Secure the line with tape and or dressing.
8. Administer drugs and fluids as needed.
9. Assess sight for signs of infiltration or leakage. Discontinue IO line if either of these occurs.

Critical Thinking Element

- If respiratory depression or hypotension occurs after administration of Dilaudid or Fentanyl, ventilate the patient as necessary and administer Narcan.
- Monitor respiratory status, SPO2 and or Waveform Capnography if available.
- Do not use an area previously used for IO attempts.
- **Sometimes marrow cannot be aspirated and does not necessarily indicate improper placement.**
- Excessive movement of the IO needle may result in leakage.
- Do not place more than one IO unless absolutely necessary.

	Peoria Area EMS System Prehospital Care Manual	Procedures Section	Page
Effective Oct 1, 2021	Central Lines and Fistulas Procedure		63

Central Lines:


A central line is an indwelling catheter that provides access to large central veins:

1. **May be used if unable to establish a peripheral IV in patients with a systolic BP < 80mmHg.**
2. **May be used if the patient is in cardiac arrest.**
3. **Do NOT administer benzodiazepines (i.e. Versed) via central line.**
4. **A 10mL syringe or larger must be used** when accessing any central line to prevent excess infusion pressure that could damage the internal wall of the catheter.
5. Always aspirate 5mL of blood from the central line and discard **prior to** administration of medications or IV fluids to remove Heparin from the line.
6. Strictly adhere to aseptic technique when handling a central line:
 - Cleanse injection port **twice** with an alcohol prep (using a new alcohol prep each time) prior to accessing.
7. Do not remove the injection cap.
8. Do not allow IV fluids to run dry.
9. Always expel **all** air from syringes and IV tubing prior to administration.
10. Should damage occur to the external catheter, immediately clamp the catheter between the skin and the damaged area.

Fistulas “Shunts”:

A fistula (“shunt”) is a surgically created subcutaneous arterio-venous vessel *anastomosis* used for patients requiring hemodialysis and should **NOT** be routinely accessed by prehospital personnel.

1. **May only be used if the patient is in cardiac arrest and peripheral IV, IO or external jugular access cannot be established.**
2. **Access must be made using a 14g or 16g IV catheter.** Do not use anything smaller.
3. **Do not** use an arm with a fistula, shunt or arterio-venous (AV) graft to obtain a blood pressure.
4. **Do not** use an arm with a fistula, shunt or AV graft to establish peripheral IV access.
5. In the event the shunt tubing is pulled out of the entrance site: apply direct pressure, elevate the arm and transport immediately to the hospital.

	Peoria Area EMS System Prehospital Care Manual	Procedures Section	Page
Effective Oct 1, 2021	Medication Administration Procedure		64

Endotracheal Tube (ETT) procedure which has previously been established and proper placement has been confirmed. Only certain medications may be given via the ETT as specified by protocol.


1. Hyperventilate the patient.
2. Disconnect the BVM if needed.
3. If CPR is being performed, stop chest compressions.
4. Dilute the medication and/or double the dose of the medication.
5. Place the needle or syringe into the lumen of the ETT (or attach to MADett™) and forcefully inject the desired amount of the drug into the lumen.
6. If it was disconnected, re-connect the BVM and resume ventilations (while withholding chest compressions for 5 seconds) and then resume chest compressions if indicated.
7. Document the name of the medication, the dose of the medication, the route of administration and the time that the drug was administered.
8. Properly dispose of the contaminated equipment.
9. Monitor and document the patient's response to the medication.

Intramuscular (IM) injections in the prehospital setting are relatively uncommon. IM injections are administered into the muscle tissue and require adequate perfusion for absorption.

1. Identify an injection site (the deltoid muscle of the upper arm and the upper outside quadrant of the gluteus muscle are commonly used). **Note:** The only approved site for the EMT-Basic & Intermediate level agencies is the left or right deltoid.
2. Clean the injection site with an alcohol prep.
3. Stretch or "flatten" the skin overlying the site with your fingers.
4. Advise the patient to expect a "stick" and to try to relax.
5. Insert the needle (preferably a 2-inch, 22g needle) at a 90 degree angle into the muscle tissue.
6. Pull back (aspirate) on the syringe to confirm that the needle is not in a vessel by observing for blood return.
 - If blood is aspirated into the syringe, discontinue the injection and start the procedure over.
 - If blood is not aspirated into the syringe, slowly inject the drug into the muscle tissue.
7. Withdraw the needle and apply pressure to the site with a gauze pad.
8. Document the name of the medication, the dose of the medication, the route of administration and the time that the drug was administered.
9. Properly dispose of the contaminated equipment.
10. Monitor and document the patient's response to the medication.

Intranasal (IN) administration may be considered when IV access is unavailable and/or when a needleless delivery system is desired because of patient agitation, combativeness, or similar conditions that may pose a safety risk to personnel. Contraindicated when nasal trauma or bleeding is present.

1. Draw up appropriate dose (volume) of medication. Allow an additional 0.1 ml in the syringe to account for the device "dead space" and attach the MAD to the end of the syringe
2. Prepare and position the patient in a supine or recumbent position. If the patient is sitting, compress the nares after administration.
3. Rapidly administer one half of the dose of medication, briskly pushing the plunger
4. Repeat with the other nostril delivering the remaining volume of medication
 - **Do NOT administer more than 1mL per nostril.**

	Peoria Area EMS System Prehospital Care Manual	Procedures Section	Page
Effective Oct 1, 2021	Universal Patient Care Procedure		65

EMR and BLS Care should be directed at conducting a thorough patient assessment, providing care to treat for shock and preparing or providing patient transportation.

1. Initiate body substance isolation (BSI) precautions prior to arrival at the scene for all patient contacts. Apply appropriate personal protective equipment (PPE) based up[on patient chief complaint and presentation. Use special care in the handling of sharps, contaminated objects, linens, etc.
2. Assure the well-being of the EMS crew by assessing scene safety. If the scene is not safe, do not enter until appropriate authorities have secured the area (i.e. violent crime calls, domestic violence calls, hazardous materials, etc.).
3. Determine the mechanism of injury, number of patients and need for additional resources.

Initial Assessment (Primary Survey)

- a) Airway: Assess airway patency and assess for possible spinal injury.
- b) Breathing: Assess for respiratory distress, bilateral chest expansion, rate, pattern & depth of ventilations, adequacy of gas exchange, use of accessory muscles and lung sounds.
- c) Circulation: Assess rate, quality & regularity of pulses, skin condition, hemodynamic status, and neck veins. Evaluate and record cardiac rhythm if indicated.
- d) Disability: Mini-neuro exam to include brief pupil check and assessment of mental status:
 - A – Alert
 - V – Not alert but responds to verbal stimuli
 - P – Not alert but responds to painful stimuli
 - U – Unresponsive to all stimuli
- e) Expose: Examine patient as indicated.
2. Focused History and Physical Exam (Secondary Survey) or Detailed Physical Exam
 - a) Vitals signs and Glasgow Coma Score
 - b) Chief complaint and history of present illness
 - c) Past medical history, current medications and allergies
 - d) Systematic head-to-toe assessment (detailed exam/secondary survey)
1. Airway: Establish and maintain a patient’s airway by using appropriate patient positioning, airway adjuncts, suctioning and advanced airway control (intubation).
2. Breathing: Evaluate adequacy of respirations by assessing chest movement, lung sounds and skin condition. Initiate oxygen therapy if indicated and provide or assist ventilations as necessary.
3. Circulation: Evaluate perfusion status by assessing carotid and peripheral pulses and skin condition. Initiate CPR and early defibrillation if indicated. Control any external hemorrhage

and establish IV access of .9% Normal Saline if indicated. No more than two (2) attempts should be made to establish an IV on scene unless requested by Medical Control.


4. Evaluate pain. Ask the patient to rate any pain on a scale of “0-10” with “0” indicating a pain-free state and “10” being the worst pain imaginable.
5. Recheck and record vital signs and patient responses at least every 15 minutes for stable patients, every 5 minutes for critical patients and after each intervention. Be sure to accurately document the times the vitals were obtained.

6. Establish Medical Control contact as indicated & transport to the closest appropriate hospital. NOTE: Follow System-specific policies regarding patient destination and bypass procedures
7. BLS providers may attach cardiac monitor, obtain 12-lead ECG and print rhythm strip for documentation, if indicated by symptoms *Cardiac Monitoring is not in the EMT scope of practice.
8. Transport should be initiated at the earliest possible opportunity & continually reassess the patient.

ILS Care should be directed at conducting a thorough patient assessment, providing care to treat for shock and preparing or providing patient transportation. The necessity of establishing IV access is determined by the patient’s condition and chief complaint. Consideration should also be given to the proximity of the receiving facility.

ALS Care should be directed at conducting a thorough patient assessment, providing care to treat for shock and preparing or providing patient transportation. The necessity of establishing IV access is determined by the patient’s condition and chief complaint. Consideration should also be given to the proximity of the receiving facility.

1. If indicated, ILS and ALS providers should establish IV access using a 1000mL solution of .9% Normal Saline with macro drip or blood tubing. No more than two (2) attempts should be made on scene. Infuse at a rate to keep the vein open (TKO) – approximately 8 to 15 drops (gtts) per minute.

	Peoria Area EMS System Prehospital Care Manual	Procedures Section	Page
Effective Oct 1, 2021	Universal Trauma Patient Care Procedure		67

Assessment and management of patients with injury or suspected injury shall be conducted in accordance with ITLS guidelines. Time from injury to definitive trauma center care is a critical factor in the morbidity and mortality of the injured patient.

First Responder Care, BLS Care, ILS Care, ALS Care

1. Scene Assessment (Scene Size-Up)

- Ensure scene safety – identify any hazards (e.g. fire, downed power lines, unstable vehicle, leaking fuel, weapons).
- Determine the number of patients.
- Identify the **mechanism of injury** (gunshot wound, vehicle rollover, high speed crash, ejection from the vehicle).
- Identify special extrication needs, if any.
- Call for additional resources if needed.

2. Primary Survey (Initial Assessment)

The purpose of the primary assessment is for the prehospital provider to rapidly identify and manage life-threatening conditions:

- Obtain a general impression of the patient’s condition.
- Assess, secure and maintain a patent airway while simultaneously using C-spine precautions.
- Assess breathing and respiratory effort:
 - Approximate respiratory rate.
 - Assess quality of respiratory effort (depth of ventilation and movement of air).
 - **Oxygen:** 15 L/min via non-rebreather mask or 6 L/min via nasal cannula if the patient cannot tolerate a mask. Be prepared suction the airway and support the patient’s respirations with BVM if necessary.
 - **Needle Chest Decompression ALS / ILS:** if patient is in severe respiratory distress or cardiac arrest with s/s of tension pneumothorax.
- Assess circulation:
 - Evaluate carotid and radial pulses.
 - Evaluate skin color, temperature and condition.
 - Immediately control major external bleeding.
- **Critical Decision** (based on mechanism of injury & initial exam):
 - Limit scene time to 10 minutes or less if the patient has a significant mechanism of injury or meets “Load & Go” criteria.
- Determine disability (level of consciousness):
 - **A – Alert**
 - **V – Responds to verbal stimuli**
 - **P – Responds to painful stimuli**
 - **U – Unresponsive**
- Expose the patient-Cut the patient’s clothing away quickly to adequately assess for the presence (or absence) of injuries.

3. Secondary Survey (Focused History & Physical Exam)

The secondary survey is a head-to-toe evaluation of the patient. The object of this survey is to identify injuries or problems that were not identified during the primary survey.

- Examine the head:
 - Search for any soft tissue injuries.
 - Palpate the bones of the face & skull to identify deformity, depression, crepitus or other injury.
 - Check pupils for size, reactivity to light, equality, accommodation, roundness and shape.
- Examine the neck:
 - Examine for contusions, abrasions, lacerations or other injury.
 - Check for JVD, tracheal deviation, deformity.
 - Palpate the c-spine for deformity & tenderness.
- Examine the chest:
 - Closely examine for deformity, contusions, redness, abrasions, lacerations, penetrating trauma or other injury.
 - Look for flail segments, paradoxical movement & crepitus.
 - Auscultate breath sounds.
 - Watch for supraclavicular and intercostals retractions.
- Examine the abdomen:
 - Examine for contusions, redness, abrasions, lacerations, penetrating trauma or other injury.
 - Palpate the abdomen and examine for tenderness, rigidity and distention.
- Examine the pelvis:
 - Examine for contusions, redness, abrasions, lacerations, deformity or other injury.
 - Palpate for instability and crepitus
- Examine the back:
 - Log roll with a minimum of 2 rescuers protecting the spine.
 - Look for contusions, abrasions, lacerations, penetrating trauma, deformity or any other injury.
 - Log roll onto long spine board and immobilize.
- Examine the extremities:
 - Examine for contusions abrasions, lacerations, penetrating trauma, deformity or any other injury.
 - Manage injuries en route to the hospital.
- Neurological exam:
 - Calculate Glasgow Coma Scale (GCS)
 - Reassess pupils
 - Assess grip strength & equality and sensation.
 - Calculate Revised Trauma Score (RTS)
- Vital signs:
 - Blood pressure
 - Pulse
 - Respirations
 - Pulse Oximetry/ EtCO₂
- History:
 - Obtain a SAMPLE history if possible.
 - Signs & symptoms
 - Allergies
 - Medications
 - Past medical history
 - Last oral intake
 - Events of the incident

- **Interventions (en route)**
 - Cardiac monitor
 - Blood glucose level
 - IV access / fluid bolus
 - Wound care
 - Splinting

4. Monitoring and Reassessment (Ongoing Assessment)

- Evaluate effectiveness of interventions
- **Vital signs every 5 minutes**
- **Reassess mental status (GCS) every 5 minutes**

5. CONTACT MEDICAL CONTROL VIA TELEMETRY (309)655-6770 AS SOON AS POSSIBLE


Glasgow Coma Scale

EYE OPENING		VERBAL RESPONSE		MOTOR RESPONSE	
					
Spontaneous	> 4	Orientated	> 5	Obey commands	> 6
To sound	> 3	Confused	> 4	Localising	> 5
To pressure	> 2	Words	> 3	Normal flexion	> 4
None	> 1	Sounds	> 2	Abnormal flexion	> 3
		None	> 1	Extension	> 2
				None	> 1

GLASGOW COMA SCALE SCORE		
Mild 13-15	Moderate 9-12	Severe 3-8

PREP

RTS variables used for scoring					
Glasgow coma scale		Systolic blood pressure		Respiratory rate	
GCS	Points	Systolic BP	Points	Resp rate	Points
15-13	4	>89	4	10-29	4
12-9	3	76-89	3	>29	3
8-6	2	50-75	2	6-9	2
5-4	1	1-49	1	1-5	1
3	0	0	0	0	0

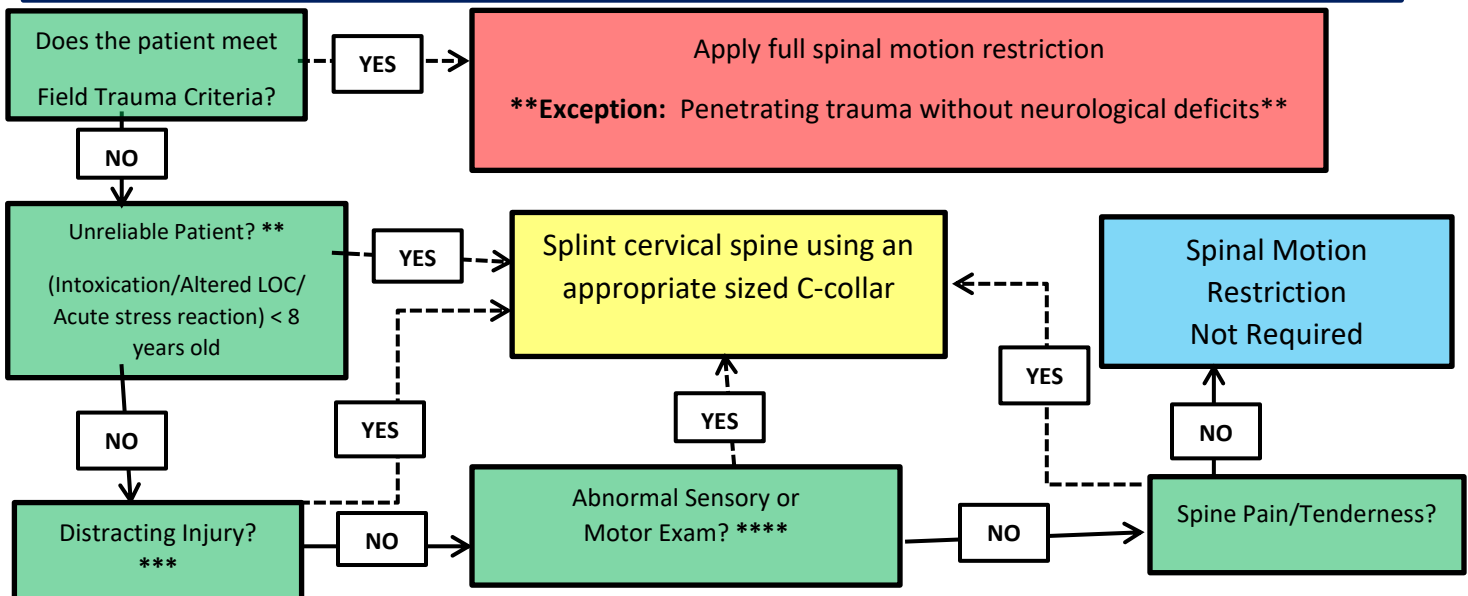
	Peoria Area EMS System Prehospital Care Manual	Procedures Section	Page
Effective Oct 1, 2021	Spinal Assessment and Clearance Procedure		70


The spine assessment procedure evaluates the risk of spine injury in patients with definite or potentially questionable mechanism of injury. This procedure is utilized to balance the risks and benefits of spine motion restriction. Follow ITLS guidelines and assessment procedures.

- Any patient meeting or potentially meeting trauma triage criteria based on the Field Triage Decision Scheme and transfers to a trauma center require full spine motion restriction.
- All patients with a definite potential or questionable mechanism of injury (MOI) for head injury or spine injury will be assessed using the Spine Assessment Procedure.
- Spine motion restriction may be deferred for patients meeting all exclusion criteria listed in the Spine Assessment Procedure.
- Only cervical spine splinting with an appropriate sized C-collar is required for patients who do not fall into trauma triage criteria, but are unable to meet all exclusionary criteria of the PAEMS Spine Assessment
- Long spine board, straps, and head blocks may be used for these patients with the EMS provider’s discretion.
- Patients, for whom spinal restriction is deferred, must meet all exclusionary criteria as indicated in the Spine Assessment Procedure.
- Victims of isolated penetrating trauma to the head, neck, and/or torso SHOULD NOT have spine motion restriction applied unless there is an obvious neurologic deficit to the extremities or if there is a significant secondary blunt MOI.
- Pediatric patients will be assessed by the EMS Provider to determine the most appropriate method of spinal immobilization (car seat, towel rolls, cervical collar, KED, or specialized pediatric device).
- If there is any doubt of potential spine injury, initiate spinal motion restriction.

If a C-collar is applied, the patient needs to remain supine. If patient comfort is a factor, the head can be elevated to a maximum of 30 degrees.

Clinical indications: patients with traumatic neck/back pain, head injury or facial trauma, or with a significant or uncertain MOI or high index of suspicion for spinal trauma (e.g. axial load (diving), MVC or bicycle, falls...). In high-risk patients (e.g. elderly, osteoporotic, degenerative disorders) less forceful mechanisms can cause significant injuries.



	Peoria Area EMS System Prehospital Care Manual	Procedures Section	Page
Effective Oct 1, 2021	Field Triage Scheme Procedure		71

The Trauma Service patient will be defined as any patient with significant injury that involves single or multiple organ system(s) who is at risk for loss of life or limb. The Trauma Service patient will be categorized as Category I or Category II.

Category I:

Blunt or Penetrating Trauma with Unstable Vital Signs and/or:

1. Hemodynamic Compromise as Evidenced By:
 Adults -- BP < 90 systolic
 Pediatric patients – BP < 70 + (2 x age in years)
2. Respiratory Compromise as Evidenced By:
 Respiratory Rate < 10 or > 29
3. Altered Mentation as Evidenced By:
 Glasgow Coma Scale < 10


Anatomical Injury:

1. Penetrating injury of head, neck, torso, groin
2. Two or more body regions with potential life or limb threat
3. Combination trauma with > 20% TBSA burn
4. Amputation above wrist or ankle
5. Limb paralysis and/or sensory deficit above the wrist and ankle
6. Clinically significant flail chest
7. Two or more proximal long bone fractures
8. Transfer from another hospital receiving blood to maintain vital signs
9. At the discretion of the ED Physician

Category II:

Based upon mechanism of injury only:

1. Ejection from motor vehicle
2. Death in same passenger compartment
3. Rollover

	Peoria Area EMS System Prehospital Care Manual	Procedures Section	Page
Effective Oct 1, 2021	Tourniquet Procedure		72

Use of tourniquets does not require on-line medical direction however; there may be situations in which medical direction consultation is advised. The goal of tourniquet application is to control previously uncontrollable/fatal hemorrhage.

Indications:

- To control potentially fatal hemorrhage from wounds or traumatic amputations when significant extremity bleeding cannot be stopped using simpler methods.
- Tourniquets may also be indicated in tactical or safety situations, those involving prolonged extrication, remote locations, multiple casualties
- Tourniquets may be considered when treating patients who have had prolonged compression of an entrapped extremity in order to decrease the life-threatening release of Potassium and acids from the ischemic limb.


Contraindications:

- Venous, bony and small vessel bleeding.
- Tourniquet application is generally unnecessary when wound bleeding is adequately controlled using direct pressure, pressure dressings, elevation, or any other simpler method.
- Non-extremity hemorrhage

Procedure:

7. Commercially made tourniquets are preferred over improvised devices with the exception of pediatric patients (as there exists no effective commercial device designed for a pediatric patient).*
8. Apply device approximately 3 inches proximal to wound. If the wound is on a joint, or just distal to the joint, apply the tourniquet above the joint.
9. Tighten until bleeding stops (venous oozing is acceptable) and/or distal pulse is absent.
10. If one tourniquet is not sufficient a second should be applied just proximal to the first.
11. Do not cover the tourniquet with a dressing.
12. Once a tourniquet has been applied, do not remove or loosen it unless ordered by medical direction.
13. Note time of tourniquet application and communicate this to the receiving care providers.
14. Dress wounds per general wound care procedure.
15. Document application time, location, and patient response on the Patient Care Report (PCR)

*** The commercially made tourniquets recommended in the PAEMS System include the Combat Application Tourniquet (CAT) and the Special Operations Forces Tourniquet (SOFT-T).**

	Peoria Area EMS System Prehospital Care Manual	Procedures Section	Page
Effective Oct 1, 2021	Needle Thoracentesis Procedure		73


Thoracic decompression involves placement of a needle through the chest wall of a critical patient who has a life-threatening tension pneumothorax and is rapidly deteriorating due to intrathoracic pressure.

Signs and symptoms of tension pneumothorax include:

- Restlessness and agitation
- Severe respiratory distress
- Increased airway resistance with ventilations
- JVD
- Tracheal deviation
- Subcutaneous emphysema
- Unequal breath sounds
- Absent lung sounds on the affected side
- Hyper resonance to percussion on the affected side
- Hypotension
- Cyanosis
- Respiratory arrest
- Traumatic cardiac arrest

Initiate *Universal Trauma Care*. If a tension pneumothorax is identified:

1. Locate the 2nd intercostal space in the midclavicular line on the side of the pneumothorax.
2. Cleanse the site with providone-iodine preps and maintain as much of a sterile field as possible.
3. Attach a 10-20mL syringe to a 2 inch, 14g IV catheter.
4. Puncture the skin perpendicularly, just superior to the 3rd rib (in the 2nd intercostal space). Direct the needle just over the 3rd rib and into the thoracic cavity. A “pop” should be felt as well as a “rush of air” along with the plunger of the syringe moving outward.
5. Advance the catheter while removing the needle and syringe.
6. Secure the catheter in the chest wall with a dressing and tape.
7. Monitor the patient **closely** and continue to reassess.

	Peoria Area EMS System Prehospital Care Manual	Procedures Section	Page
Effective Oct 1, 2021	Push Dose Epi Procedure		74

Medication Safety Points:

- **Epinephrine 1:1,000 1 mg/mL vials can NOT be used.** Use of this vial to prepare the medication will result in a 10-fold overdose (note the different concentrations between the 2 packages)
- LABEL THE SYRINGE!! to avoid erroneous administration of this syringe to this or another patient with the assumption that this is a flush

Indication:

Hypotension

- Temporizing measure for hypotension or post intubation hypotension

Tissue perfusion

- improve perfusion to vital organs or maintain perfusion which is often impaired after return of spontaneous circulation


Mechanism of action:

Epinephrine stimulates alpha and beta receptors. Alpha activity allows it to act as a vasopressor and beta activity allows it to act as an inotrope.

- Vasopressor: increases peripheral vascular resistance > improve blood pressure
- Inotrope: increases myocardial contraction > improve heart rate
- Risk of tachycardia; avoid use in patients with tachycardia or tachyarrhythmia > Use phenylephrine in these patients

Table 1: Making push dose epinephrine

1. Take 1 mg of cardiac epinephrine (0.1 mg/mL) and waste 9 mL of epinephrine.
2. Into that syringe, withdraw 9 mL of normal saline from the patient's IV bag. Shake well.
3. The mixture now has 10 mL of epinephrine at 0.01 mg/mL (10 mcg/mL) concentration.
4. Use 0.5 ml (5 mcg) "pushes" IV to titrate to a systolic blood pressure > 90 mmHg.

	Peoria Area EMS System Prehospital Care Manual	Procedures Section	Page
Effective Oct 1, 2021	Immunization Administration Procedure		75

EMS providers may be tasked with administering vaccinations in certain specific health emergencies. As healthcare providers authorized to administer such vaccinations there are specific procedures required for specific vaccines. Any questions should be directed to the EMS office and/ or the Medical Director.

Prior to vaccination:

1. Provide the patient with the CDC Vaccination Information Sheet (VIS).
2. The patient must complete the Patient Vaccination Administration Record (VAR).
3. Review the patient self-reported risk questionnaire.
 - a. If there are any contraindications or if it is poorly filled out seek Medical Director guidance.
4. Ensure all documentation is complete and accurate.
5. Verify patient's Name and Birth Date.

Vaccination Administration: Verify the correct vaccine, and obey the 6 rights of medication administration...
Right patient, Right Vaccine, Right dose, Right route, Right time, Right documentation

Complete the Vaccination Administration Record (VAR) with the following:

- a. Date administered
- b. Vaccine
- c. Lot #
- d. Route, anatomical location, and depth of administration
- e. Vaccinator name and signature
- f. Vaccination Information Sheet (VIS) publication date

Post Vaccination: Observe the patient for minimum of 5 minutes for any reaction. If there is an observed reaction refer to the Allergic reaction/ Anaphylaxis protocol. If there is a reaction the patient should be transported to the ED for evaluation

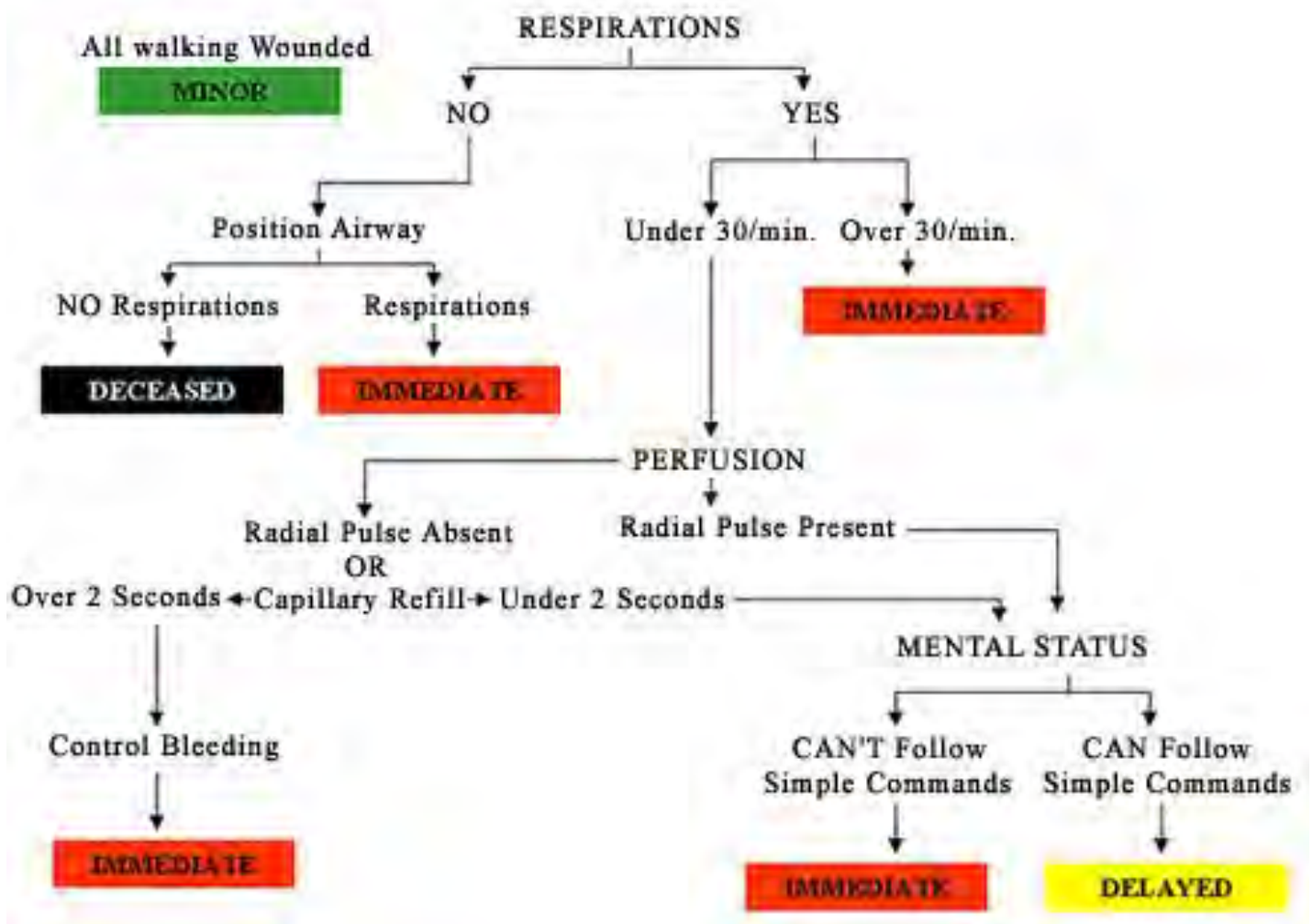


In order to prioritize treatment and transport of patients involved in a mass casualty incident the PAEMS System utilizes the START and JUMP START triage system to establish such priorities.

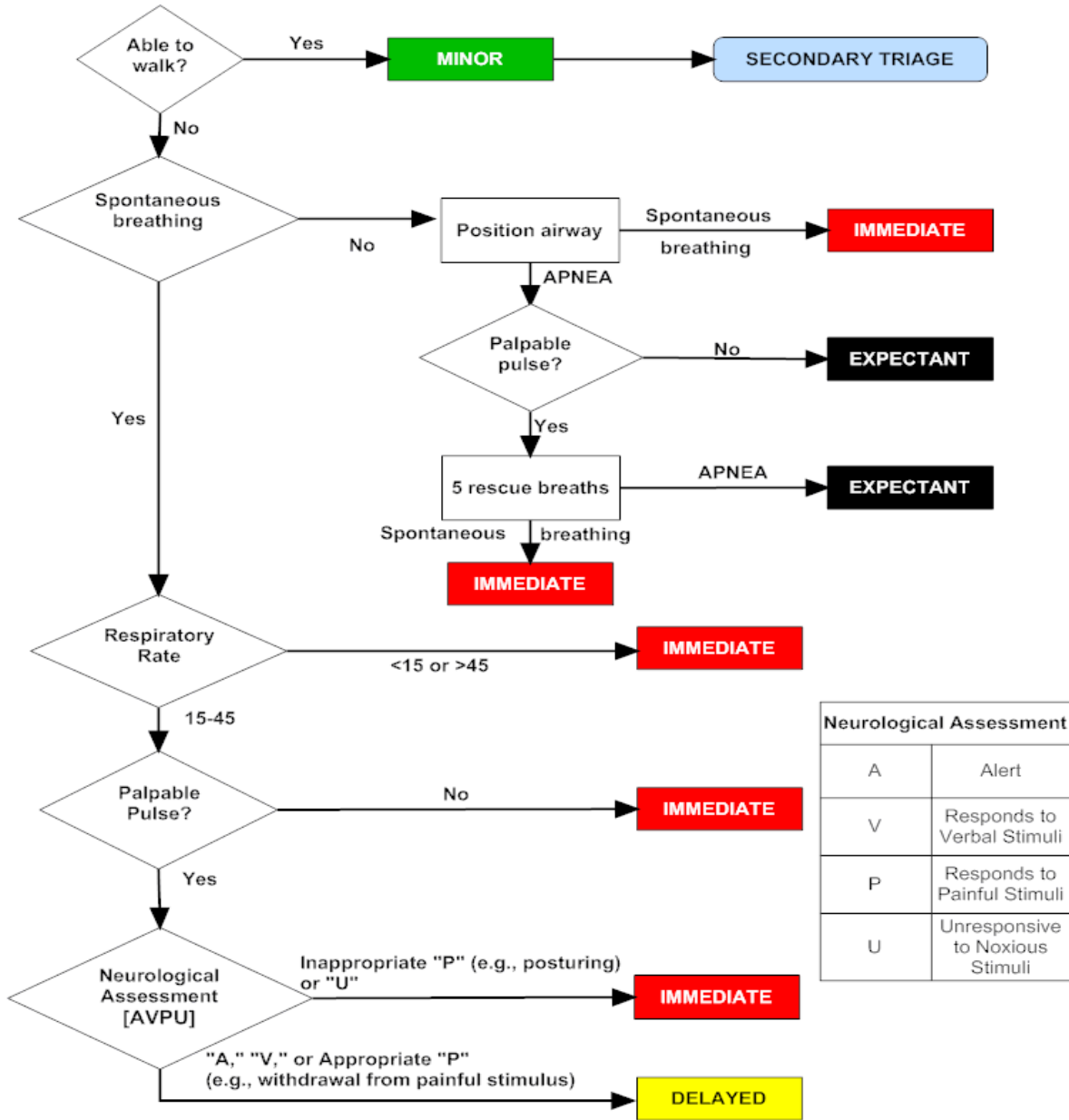
START triage system is to be utilized for adult patients and the JUMP START triage system is to be utilized for pediatric patients.

Due to physiologic differences the pediatric patient may become apneic easier during poor positioning following a traumatic incident. Therefore the JUMP Start system has additional steps designed to open the airway and provide airway assistance in order to give the pediatric patient an opportunity to breathe and improve clinical outcomes.

START Triage System



JumpSTART Pediatric Multiple Casualty Incident Triage



Use JumpSTART if the Patient appears to be a child.


Use an adult system, such as START, if the patient appears to be a young adult.

Triage Categories

<p>EXPECTANT Black Triage Tag Color</p> <ul style="list-style-type: none"> Victim unlikely to survive given severity of injuries, level of available care, or both Palliative care and pain relief should be provided 	<p>DELAYED Yellow Triage Tag Color</p> <ul style="list-style-type: none"> Victim's transport can be delayed Includes serious and potentially life-threatening injuries, but status not expected to deteriorate significantly over several hours
<p>IMMEDIATE Red Triage Tag Color</p> <ul style="list-style-type: none"> Victim can be helped by immediate intervention and transport Requires medical attention within minutes for survival (up to 60) Includes compromises to patient's Airway, Breathing, Circulation 	<p>MINOR Green Triage Tag Color</p> <ul style="list-style-type: none"> Victim with relatively minor injuries Status unlikely to deteriorate over days May be able to assist in own care: "Walking Wounded"



PAEMS Adult Medical Protocols

	Peoria Area EMS System Prehospital Care Manual	Medical Protocols	Page
Effective Oct 1, 2021	Universal Cardiac Care Protocol		79

Patients experiencing chest pain with a suspected cardiac origin may present with signs and symptoms which include:

- Substernal chest pain / pressure
- Heaviness, tightness or discomfort in the chest
- Radiation and/or pain/discomfort to the neck or jaw
- Pain/discomfort/weakness in the shoulders/arms
- Nausea/vomiting
- Diaphoresis
- Dyspnea

Priorities in the care of chest pain patients include:

- Assessing and securing ABCs.
- Determining the quality and severity of the patient’s distress.
- Identifying contributing factors of the event.
- Obtaining a medical history (including medications & allergies).

Timely transportation to the emergency department is an important factor in patient outcome.

****Strongly encourage transport to a hospital with an interventional catheterization lab when STEMI is present on 12-Lead ECG.**

First Responder & BLS Care

First Responder and BLS Care should be focused on assessing the situation and initiating care to reassure the patient, reducing the patient’s discomfort and beginning treatment for shock.

1. Render initial care in accordance with the *Universal Patient Care Protocol*.
2. **Oxygen:** 15 L/min via non-rebreather mask. If the patient does not tolerate a mask, then administer 6 L/min via nasal cannula.
3. **Aspirin (ASA):** 324mg PO (4 tablets of 81mg chewable aspirin by mouth).
 - a. **Ask the patient specifically about any history of hypersensitivity to ASA.**
 - b. **Do not give ASA to patients with active ulcer disease, asthma or known allergy to ASA.**
4. BLS providers may administer **Nitroglycerin (NTG):** 0.4mg SL (1 metered spray dose sublingually). May repeat every **3-5 minutes** to a total of 3 doses (if systolic BP remains > 100mmHg).
 - a. NTG & ASA may be administered without contacting Medical Control if the patient is age 30 or older, has chest pain consistent with acute myocardial infarction (AMI) and has a systolic BP > 100mmHg.
If the patient does not meet criteria, consult Medical Control prior to administering NTG.
5. BLS providers must obtain **12-Lead EKG** and transmit to Medical Control as soon as possible.
****3-Lead monitoring is not within the scope of practice of the EMT-B****
6. Initiate ALS (or ILS) intercept if necessary and transport as soon as possible.
7. **Contact Medical Control** as necessary.


ILS & ALS Care

ILS and ALS Care should be directed at conducting a thorough patient assessment, providing care to reassure the patient, reducing the patient's discomfort, beginning treatment for shock and preparing or providing patient transportation. ILS Care should include aspects of EMR and BLS Care.

1. **Ondansetron (Zofran):** 4mg PO orally disintegrating tablet for nausea and vomiting
2. **Fentanyl:** 50mcg IV, over 2 minutes for pain. Fentanyl 50mcg IV may be repeated every **5 minutes** to a total of 200mcg.
Fentanyl: 50mcg IM, if unable to initiate IV access. May be repeated as needed to a total of 200mcg. **Fentanyl:** IN (See Intranasal Fentanyl Dosing Chart)
3. **Contact Medical Control** as necessary, regardless of EKG transmission.
ALS Care should contain all aspects of EMR, BLS, and ILS Care-along with the consideration of the following:
 1. **Nitropaste (Nitro-Bid):** 1 inch to anterior chest wall if patient's systolic BP is greater than 100mmHg.
 2. **Fentanyl:** 50mcg IV, over 2 minutes for pain. Fentanyl 50mcg IV may be repeated every **5 minutes** to a total of 200mcg.
Fentanyl: 50mcg IM, if unable to initiate IV access. May be repeated as needed to a total of 200mcg. **Fentanyl:** IN (See Intranasal Fentanyl Dosing Chart)
 3. Transport as soon as possible and contact medical control if necessary (transport can be initiated at any time during this sequence).

Critical Thinking Elements

- ILS & ALS may administer Nitroglycerin when the patient's systolic blood pressure is between 90-100mmHg if IV access has been established.
- Use caution with acute inferior wall MI (II, III, aVF) – Place IV and administer 20ml/kg Normal Saline as needed following Nitroglycerin
- Use caution with acute septal wall MI (V1, V2) – Watch for AV blocks and consider pacing.
- Initiate ALS intercept if the patient's chest pain is not eliminated with Oxygen or NTG.
- Consider the patient to be in cardiogenic shock if the patient has dyspnea, diaphoresis, a systolic BP < 100mmHg, and signs of congestive heart failure.
- Obtaining a 12-Lead EKG should not significantly delay initiation of transport.
- EKG limb leads should actually be placed on the patient's limbs!
- A pulse oximeter is a tool to aid in determining the degree of patient distress and the effectiveness of EMS interventions. A high pulse oximeter reading should not result in oxygen therapy being withheld.
- NTG that the patient self-administers prior to EMS arrival should be reported to Medical Control. Subsequent doses should be provided by the EMS unit's stock.
- Medications should not be administered IM to a suspected AMI patient.
- Nitro paste can be placed on the patient's upper back instead of the anterior chest if needed (e.g. if the patient has excessive chest hair).
- If the patient's systolic BP drops below 90mmHg, wipe the Nitropaste off.
- The goal of the EMT-B is to obtain a 12-Lead EKG and send it to the receiving hospital as soon as possible
- 10 minutes is the goal for EKG's to be performed at all levels.
- Avoid use of Zofran in patients with congenital long QT syndrome as these patients are at particular risk for Torsades de Pointes

	Peoria Area EMS System Prehospital Care Manual	Medical Protocols	Page
Effective Oct 1, 2021	Cardiogenic Shock Protocol		81

Cardiogenic shock occurs when the “pump” component of perfusion (the heart) begins to fail. The signs and symptoms of cardiogenic shock include:

- Pain, heaviness, tightness or discomfort in the chest with hypotension (systolic BP < 100mmHg)
- Rales or crackles (“wet” lung sounds), Dyspnea, Pedal edema, Diaphoresis, Nausea/vomiting

Patients with a history of AMI or CHF have increased risk factors. Priorities in the care of the Cardiogenic shock patient include:

- Assessing and securing ABCs.
- Determining the quality and severity of the patient’s distress.
- Identifying contributing factors of the event.
- Obtaining a medical history (including medications and allergies).

Timely transportation to the emergency department is an important factor in patient outcome.

First Responder & BLS Care should be focused on assessing the situation and initiating care to reassure the patient, reducing the patient’s discomfort and beginning treatment for shock.

1. Render initial care in accordance with the *Universal Patient Care Protocol*.
2. **Oxygen:** 15 L/min via non-rebreather mask. If the patient does not tolerate a mask, then administer 6 L/min via nasal cannula.
3. Initiate ALS (or ILS) intercept and or transport as soon as possible.

ILS & ALS Care should be directed at conducting a thorough patient assessment, providing care to reassure the patient, reducing the patient’s discomfort, beginning treatment for shock and preparing or providing patient transportation. ILS Care should include aspects of EMR and BLS Care.


1. Render initial care in accordance with the *Universal Patient Care Protocol*.
2. **Oxygen:** 15 L/min via non-rebreather mask. If the patient does not tolerate a mask, then administer 6 L/min via nasal cannula.
3. **IV Fluid Therapy:** 20mL/kg fluid bolus to maintain Systolic pressure 80-90 mmHg..
4. Obtain **12-Lead EKG** and transmit to receiving hospital. Contact Medical Control if wide complex tachycardia or consultation is needed.
5. Initiate ALS intercept and transport as soon as possible.
6. **Contact Medical Control** as soon as possible.
7. **ALS only:** may administer 500 mL fluid bolus (avoid if signs of heart failure present, including dyspnea, JVD, orthopnea, rales).

8. **ALS only: Norepinephrine** infusion (this medication is system optional for prolonged scene times or transports): 1-20 mcg/min. Start at 5 mcg/min, titrate every 5-10 min to maintain SBP > 90.
 - a. Administer through a confirmed patent, large bore (>18 gauge) IV in a proximal vein. (Antecubital preferred), as this medication may cause limb necrosis if extravasation occurs.
 - b. If extravasation occurs, notify stop medication, and notify receiving facility immediately.
 - c. Monitor blood pressure every 5 minutes
9. **ALS only: Push-dose epinephrine** (10 mcg/mL) (for short transports)
 - a. To make: Draw up 1 mL of 1:10,000 cardiac epinephrine into a 10 mL syringe, and then draw up 9 mL of normal saline.
 - b. The syringe should be mixed by rolling it between the palms prior to administration.
 - c. Administration: **Push-dose epinephrine 0.5-1 mL** slow IV infusion of every 1-5 minutes to maintain SBP > 90 (See the push-dose Epi procedure Pg. 74)

Caution must be taken in giving pressors in the setting of MI as they may worsen ischemia/infarct. If the patient has a cardiac dysrhythmia, treat the underlying rhythm disturbance according to the appropriate SMO. Transport as soon as possible (transport can be initiated at any time during this sequence) and **Contact Medical Control** as necessary.

Notes:

Use same sepsis protocol as previous, but insert above norepi and push-dose epi dosing/protocol. Push-dose epi should not be used in anaphylaxis- subcutaneous epi is sufficient and just as effective.

	Peoria Area EMS System Prehospital Care Manual	Medical Protocols	Page
Effective Oct 1, 2021	Cardiac Arrest Protocol		83

The successful resuscitation of patients in cardiac arrest is dependent on a systematic approach of initiating life-saving CPR and early defibrillation and transferring care to advanced life support providers in a timely manner.

First Responder & BLS Care should be focused on confirming that the patient is in full arrest and in need of CPR. Resuscitative efforts should be initiated by opening the airway and initiating ventilations & chest compressions while attaching a defibrillator. It is important to assure that CPR is being performed correctly following AHA BLS guidelines.

1. Determine unresponsiveness. Confirm that a transporting unit (and ALS intercept) has been activated.
2. Check for pulse (10 seconds). If pulseless, **begin CPR**. CPR should start with compressions at a rate of 100-120/min with a ratio of 30 compressions to 2 ventilations for 5 cycles (2 minutes)
3. Apply an AED **after 2 minutes of CPR** to determine if defibrillation is needed.
4. Continue CPR until the AED is attached and turned on. Stop CPR when the AED is analyzing:
 - a) If the AED indicates "SHOCK ADVISED", call out "**CLEAR!**" check for the safety of others, and push the SHOCK button (or stand clear if the AED device does not require shock activation).
 - b) Immediately **resume CPR (starting with compressions) for 5 cycles or (2 minutes)**.
 - c) Reassess the patient and allow the AED to analyze.
 - d) If the AED indicates "SHOCK ADVISED", call out "**CLEAR!**" check for the safety of others, and push the SHOCK button (or stand clear if the AED device does not require shock activation).
 - e) Check for a pulse if the AED states "NO SHOCK ADVISED".
 - f) **Continue CPR if pulse is absent.**
 - g) **Reassess every 2 minutes**. Shock if indicated.
 - h) If the patient regains a pulse at any time during resuscitation, then maintain the airway and assist ventilations.
 - i) Re-analyze the patient's rhythm with the AED if the patient returns to a pulseless state. Shock if indicated.
5. **Narcan**: 2mg IN (1mg per nare) for suspected or known narcotic overdose.
6. ***Place BIAD Airway (if possible) and continue ventilations. * (Expanded Scope for the EMR level)**
7. Immediately turn patient care over to the transporting provider or ALS intercept crew upon their arrival.
8. Complete all necessary cardiac arrest documentation.


ILS and ALS Care should focus on maintaining the continuity of care by confirming that the patient is in cardiac arrest and beginning resuscitative efforts or continuing resuscitative efforts initiated by the First Responders and or EMT's and following recommended AHA guidelines for ACLS and/ or PALS.

1. Determine unresponsiveness.
2. Check for pulse (10 seconds). If pulseless, **begin CPR**. CPR should start with compressions at a rate of 100-120/min with a ratio of 10 compressions to 1 ventilation PAEMS "high performance" CPR or (AHA 30:2).
3. Apply Quick-Combo pads (or Fast Patches).
4. Evaluate the rhythm.

5. If V-fib or pulseless V-tach, immediately **defibrillate per manufacturer's recommendations for biphasic monitors (or 360J for monophasic defibrillators).**
6. **Immediately resume CPR (starting with compressions) for 2 minutes.**
7. Evaluate the patient/rhythm and defibrillate if needed. **Continue CPR and re-evaluate patient/rhythm every 2 minutes.**
7. **Intubate** the patient with appropriately sized ET tube and provide ventilation at 12 breaths/minute.
8. If intubation is unsuccessful, **place BIAD Airway (if possible) and continue ventilations.**
9. Establish **peripheral IV** access and administer **Epi 1:10,000** 1mg IV every 3-5 minutes as needed.
10. Identify and treat H's and T's along with cardiac dysrhythmias according to the appropriate protocol.
11. Place Orogastic Tube (OG) if time permits to relieve gastric distention if necessary.

Critical Thinking Elements

- **If the cardiac arrest is witnessed by EMS personnel, start CPR and defibrillate immediately after Fast Patches or Quick Combos are placed.**
- Do not touch, ventilate or move the patient while the AED is analyzing.
- Do not exceed three (3) shocks on scene without contacting Medical Control.
- Patients with implanted pacemakers or implanted defibrillators (AICDs) are treated the same way as any other patient; however do not place the electrodes, Quick Combo pads or Fast Patches over the top of the pacemaker or AICD site.
- Treat the patient – not the monitor. **A rhythm present on the monitor screen should NOT be used to determine pulse.** If the monitor shows a rhythm and the patient has no pulse, begin CPR (the patient is in PEA – *pulseless electrical activity*).
- Trauma patients in cardiac arrest should be evaluated for viability. If the patient is to be resuscitated, begin CPR and LOAD & GO.
- When changing to ALS monitoring equipment, attach defibrillation cables prior to disconnecting the AED.
- Resuscitation and treatment decisions are based on the duration of the arrest, physical exam and the patient's medical history. Consider cease-effort orders if indicated.
- Consider underlying etiologies and treat according to appropriate protocols.
- The 2010 American Heart Association (AHA) ACLS Guidelines **do not** recommend transcutaneous pacing for agonal rhythms or cardiac arrest

	Peoria Area EMS System Prehospital Care Manual	Medical Protocols	Page
Effective Oct 1, 2021	Pulseless Rhythms Protocol		85

ACLS medications are an important factor in successful resuscitation of the pulseless patient when the initial rhythm is not ventricular fibrillation (V-fib) or in cases where defibrillation has been unsuccessful. It is important that BLS providers understand the value of effective CPR and an ALS intercept in providing the patient with ACLS therapy.

First Responders and EMT's are not equipped with ACLS medications and shall treat the patient in accordance with the *Cardiac Arrest Protocol*.

VFib, VTach, Asystole, and/ or PEA

ILS & ALS Care

1. Initiate *Cardiac Arrest Protocol*.
2. Evaluate rhythm after 2 minutes of CPR. If V-fib or pulseless V-tach: **Defibrillate per manufacturer's recommendations for biphasic monitors (or 360J for monophasic defibrillators)**.
3. **Immediately resume CPR for 2 minutes** and re-evaluate the patient/rhythm.
4. **Epinephrine 1:10,000: 1mg IV** if patient is pulseless and repeat every **3-5 minutes** as needed.
5. If pulseless V-fib/V-tach persists: **Defibrillate per manufacturer's recommendations for biphasic monitors (or 360J for monophasic defibrillators)**.
6. **Immediately resume CPR for 2 minutes** and re-evaluate the patient/rhythm.
7. **Lidocaine: 1.5mg/kg IV or 3.0mg/kg ETT** for persistent V-fib or V-tach. Repeat bolus: **1.5mg/kg IV in 3-5 minutes** to a total of **3mg/kg** if patient remains in V-fib or V-tach.
8. If pulseless V-fib/V-tach persists: **Defibrillate per manufacturer's recommendations for biphasic monitors (or 360J for monophasic defibrillators)**.
9. **Immediately resume CPR** and re-evaluate patient/rhythm every 2 minutes.
10. **Dextrose 50%: 25g IV** if the patient's blood sugar is < 60mg/dL or **Dextrose D10: 250ml bolus WO**
11. **Narcan: 2mg IV/IN or 4mg ETT** if the patient is suspected for narcotic overdose.
12. Transport as soon as possible and contact medical control as necessary.

As an alternative to **Lidocaine** the **ALS provider** should consider **Amiodarone**: Initial dose 300mg bolus IV/IO for persistent V-fib or pulseless V-tach. Repeat dose: 150mg bolus IV/IO if patient remains in V-fib or pulseless V-tach following at least 2 minutes of CPR.

ALS Providers: Sodium Bicarbonate: 50meq IV/IO if known tricyclic antidepressant (TCA) overdose, known Aspirin (ASA) overdose or patient suffers from chronic renal failure.


For Torsades de Pointes or Refractory V-fib: Magnesium Sulfate: Rapid infusion 1-2 gm IV (mixed 50 ml D5W using macro drip, wide open), followed by a maintenance infusion of 1 gm (mixed 250 ml NS administer using micro drip, 30-60 gtts/min).

Possible Causes of Pulseless Electrical Activity (PEA) / Asystole-The H's and T's

- Hypovolemia
- Hypoxia
- Hydrogen Ions (Acidosis)
- Hypokalemia/Hyperkalemia
- Hypothermia
- Hypoglycemia
- Toxins / Tablets (Drug Overdose)
- Tamponade (Pericardial Tamponade)
- Tension Pneumothorax
- Thrombosis (Acute Coronary Syndrome or Pulmonary Embolism)
- Trauma

Critical Thinking Elements

- **If the cardiac arrest is witnessed by EMS personnel, start CPR and defibrillate immediately after Fast Patches or Quick Combos are placed for V-fib/pulseless V-tach.**
- Treat the patient – not the monitor. **A rhythm present on the monitor screen should NOT be used to determine pulse.** If the monitor shows a rhythm and the patient has no pulse, begin CPR (the patient is in PEA).
- Trauma patients in cardiac arrest should be evaluated for viability. If the patient is to be resuscitated, begin CPR and LOAD & GO.
- Consider underlying etiologies and treat according to appropriate protocols (e.g. airway obstruction, metabolic shock, hypovolemia, central nervous system injury, respiratory failure, anaphylaxis, drowning, overdose, poisoning, etc.).
- A 20mL fluid bolus should be given after each drug administration to flush the IV line.

	Peoria Area EMS System Prehospital Care Manual	Medical Protocols	Page
Effective Oct 1, 2021	Unstable Bradycardia Protocol		87

Bradycardia is defined as a heart rate less than sixty beats per minute (< 60 bpm). Determining the stability of the patient with bradycardia is an important factor in patient care decisions. The assessment of the patient with bradycardia should include evaluation for signs and symptoms of hypoperfusion.

The patient is considered **stable** if the patient is asymptomatic (i.e. alert and oriented with warm, dry skin and a systolic BP > 100mmHg)

The patient is considered **unstable** if he/she presents with:

- An altered level of consciousness (ALOC).
- Diaphoresis.
- Dizziness.
- Chest pain or discomfort.
- Ventricular ectopy.
- Hypotension (systolic BP < 100mmHg).

First Responder & BLS Care should be focused on assessing the situation and initiating Universal patient care to treat for shock.

1. Render initial care in accordance with the *Universal Patient Care Protocol*.
2. **Oxygen: 15 L/min** via non-rebreather mask or 6 L/min via nasal cannula if the patient does not tolerate a mask.
3. BLS providers should obtain **12-Lead EKG** and transmit to the receiving hospital as soon as possible
3-Lead monitoring is not in the scope of the EMT-B
4. Initiate ALS intercept and transport as soon as possible.

ILS & ALS Care should be directed at continuing or establishing care, continuing EMR and BLS care, conducting a thorough patient assessment, stabilizing the patient's perfusion and preparing for or providing patient transport.

1. **IV Fluid Therapy: 20mL/kg** fluid bolus for systolic BP less than 100mmHg.
2. Initiate ALS intercept and transport as soon as possible. (*Transport can be initiated at any time during this sequence*).
3. **Atropine: 0.5mg** IV if the patient's perfusion does not improve after the fluid bolus, if the patient is hemodynamically unstable or if the cardiac rhythm is an AV block (other than a 3rd degree block). May repeat 0.5mg IV every **5 minutes (with Medical Control order)** up to a total of 3mg.
4. Contact receiving hospital (or Medical Control if needed).


ALS Care:

1. **Immediate Transcutaneous Pacing:** If the patient is in a **3rd degree AV blocks** (or in a **Type II 2nd degree AV block** unresponsive to Atropine).
 - Target heart rate should be set at **70 bpm**.
 - Current should be set at minimum to start and increased until capture is achieved.
 - Refer to the *Transcutaneous Pacing Procedure* for additional information.

2. **Midazolam (Versed): 2mg IV/IO** for patient comfort after pacing is initiated. Re-check vital signs 5 minutes after administration. May repeat dose one time if systolic BP > 100mmHg and respiratory rate is > 10 rpm. Additional doses require Medical Control order. **Midazolam (Versed):** Intranasal if unable to obtain IV access. (See **Intranasal Dosing Chart Pg. 49**).
3. Administer **500 mL fluid bolus** (avoid if signs of heart failure present, including dyspnea, JVD, orthopnea, rales).
4. **Norepinephrine** infusion (this medication is system optional for prolonged scene times or transports): 1-20 mcg/min. Start at 5 mcg/min, titrate every 5-10 min to maintain SBP > 90.
 - a. Administer through a confirmed patent, large bore (>18 gauge) IV in a proximal vein. (Antecubital preferred), as this medication may cause limb necrosis if extravasation occurs.
 - b. If extravasation occurs, notify stop medication, and notify receiving facility immediately.
 - c. Monitor blood pressure every 5 minutes
5. **Push-dose epinephrine (10 mcg/mL)** (for short transports)
 - d. To make: Draw up 1 mL of 1:10,000 cardiac epinephrine into a 10 mL syringe, and then draw up 9 mL of normal saline.
 - e. The syringe should be mixed by rolling it between the palms prior to administration. Administration: 0.5-1 mL slow IV infusion of **push-dose epinephrine** every 1-5 minutes to maintain SBP > 90 (See the **push-dose Epi procedure Pg. 74**)
6. Caution must be taken in giving pressors in the setting of MI as they may worsen ischemia/infarct.
7. If the patient has a cardiac dysrhythmia, treat the underlying rhythm disturbance according to the appropriate SMO.
8. Transport as soon as possible (transport can be initiated at any time during this sequence) and **Contact Medical Control** as necessary.

Critical Thinking Elements

- Monitor respiratory status, SPO2 and or Waveform Capnography if available if Versed or Ativan is given.
- Treat the patient – not the monitor. Bradycardia does not necessarily mean that the patient is unstable or requires intervention.
- Treat underlying etiologies according to protocol.
- Atropine is NOT to be given if the patient's blood pressure is normal or elevated.
- *Bradycardia may be present due to increased intracranial pressure from a stroke or head injury.* Contact Medical Control.
- Factors to consider during the assessment of the patient who presents with bradycardia include: patient health & physical condition (e.g. an athlete), current medications (e.g. beta blockers), trauma or injury related to the event (e.g. a head trauma patient exhibiting signs of herniation or *Cushing's response*), and other medical history.
- Assess for underlying causes (e.g. hypoxia, hypovolemic shock, cardiogenic shock, or overdose).
- Fluid bolus should not delay Atropine administration or TCP if the patient is unstable.
- If the patient's presenting rhythm is a 3rd degree block, immediately prepare to pace. If the patient is symptomatic, pacing should be started without delay.
- The goal of the EMT-B is to obtain a 12-Lead EKG and transmit it to the receiving hospital as soon as possible
- 10 minutes is the goal for EKG's to be performed at all levels.

	Peoria Area EMS System Prehospital Care Manual	Medical Protocols	Page
Effective Oct 1, 2021	Narrow Complex Tachycardia		89

Tachycardia is defined as a heart rate > 100 bpm. Once the heart rate reaches 150 bpm, the patient is at risk for shock. A narrow QRS complex indicates that the rhythm may be originating in the atrium. Determining the stability of the patient with tachycardia is an important factor in patient care decisions.

The patient is considered **unstable** if the patient has an altered level of consciousness, diaphoresis, dizziness, chest pain or discomfort, ventricular ectopy and/or is hypotensive.

First Responder and BLS Care should be focused on assessing the situation and initiating routine patient care to treat for shock.

1. Render initial care in accordance with the *Universal Patient Care Protocol*
2. **Oxygen: 15 L/min** via non-rebreather mask or 6 L/min via nasal cannula if the patient cannot tolerate a mask.
3. BLS providers should obtain **12-Lead EKG** and transmit to the receiving hospital as soon as possible.
3-Lead monitoring is not in the scope of the EMT-B
4. If patient is stable, regular or irregular attempt vagal maneuver (**Do not perform carotid massage**)
5. Initiate ALS intercept and transport as soon as possible.

ILS and ALS Care should be directed at continuing or establishing care, conducting a thorough patient assessment, continuing EMR and BLS Care, stabilizing the patient's perfusion and preparing for or providing patient transport.

1. Consider 20mL/kg fluid bolus to rule out hypovolemia/dehydration as cause of tachycardia.
2. Initiate ALS intercept and transport as soon as possible. (*Transport can be initiated at any time during this sequence*).
3. Contact receiving hospital (or Medical Control if needed) as soon as possible.
4. **ALS only: For suspected SVT: Adenosine (Adenocard): 6mg IV {rapid IV push}** if the patient is alert and oriented, has a systolic BP greater than 100mmHg, has a HR greater than 150bpm and is *obviously* not in atrial fib or atrial flutter. If no response after **2 minutes**, administer **12mg IV {rapid IV push}** may repeat once if necessary.
5. **ALS only: For confirmed Atrial Fib/Flutter with rapid ventricular response ("irregularly irregular rhythm") with BP greater than 110 systolic**
Diltiazem (Cardizem) 0.25 mg/Kg (max 25 mg) mg slow IV push (over 2 minutes).
If BP remains greater than 110 systolic, and rate is still greater than 110 after 5 minutes, may administer second dose of 0.35 mg/Kg (max 25 mg) slow IV push.

If a pump is available, may initiate continuous infusion starting at 5 mg/Hr. Infusion may be titrated every 5 minutes by 5 mg/Hr to a max of 15 mg/Hr for Heart rate remaining greater than 110.

Discontinue if hemodynamic instability occurs (BP less than 100, HR less than 60)

6. **Midazolam (Versed): 2mg IV/IO** for patient comfort during synchronized cardioversion. Recheck vital signs 5 minutes after administration. May repeat dose one time if systolic BP > 100mmHg and respiratory rate is > 10 rpm. Additional doses require Medical Control order. Midazolam (Versed): Intranasal if unable to obtain IV access. (See intranasal dosing sheet in the Prehospital Care Manual).


7. **ALS only: Synchronized Cardioversion:** If the patient has an altered level of consciousness, diaphoresis, chest pain or discomfort, pulmonary edema and/or is hypotensive:
Synchronized cardioversion at **100 Joules**** if tachycardia persists.
Synchronized cardioversion at **200 Joules**** if tachycardia persists.
Synchronized cardioversion at **300 Joules**** if tachycardia persists.
Synchronized cardioversion at **360 Joules**** if tachycardia persists.

Contact the receiving hospital as soon as possible.

****Or biphasic equivalent**

Critical Thinking Elements

- Monitor the patient for respiratory depression when administering sedatives.
- Monitor respiratory status, SPO2 and or Waveform Capnography if available.
- Treat the patient – not the monitor. Tachycardia does not necessarily mean that the patient is unstable or requires intervention.
- Factors to consider during the assessment of the patient with tachycardia include: patient health & physical condition, trauma or injury related to the event, current medications and medical history.
- Assess for underlying causes (e.g. hypovolemic shock) and treat according to protocol.
- When administering Adenocard, be prepared for immediate defibrillation if the rhythm converts to v-fib.
- **DO NOT administer Adenocard if the heart rate is < 150 bpm** without consulting Medical Control.
- 20mL Normal Saline bolus following administration
- Adenosine not to be used for rapid Atrial Fibrillation or WPW
- Examples of vagal maneuvers include valsalva maneuver, or coughing. **DO NOT** perform carotid massage.
- The Goal of the EMT/B is to obtain a 12 lead EKG and send it to the receiving hospital as soon as possible.
- 10 minutes is the goal for EKG's to be performed at all levels.

	Peoria Area EMS System Prehospital Care Manual	Medical Protocols	Page
Effective Oct 1, 2021	Wide Complex Tachycardia		91

A patient with tachycardia is an important factor in patient care decisions. The assessment of the patient with tachycardia should include evaluation for signs and symptoms of hypoperfusion.

The patient is considered **stable** if they're alert & oriented with warm & dry skin & a systolic BP > 100mmHg. The patient is considered **unstable** if the patient has an altered level of consciousness, diaphoresis, dizziness, chest pain or discomfort, ventricular ectopy and/or hypotension.

First Responder & BLS Care should be focused on assessing the situation and initiating Universal patient care to treat for shock.

1. Render initial care in accordance with the *Universal Patient Care Protocol*.
2. **Oxygen: 15 L/min** via non-rebreather mask or 6 L/min via nasal cannula if the patient cannot tolerate a mask.
3. BLS provider should obtain **12-Lead EKG** and transmit to receiving hospital as soon as possible.
3-Lead monitoring is not in the scope of the EMT-B
4. Initiate ALS intercept and transport as soon as possible.

ILS & ALS Care should be directed at continuing or establishing care, continuing EMR and BLS care, conducting a thorough patient assessment, stabilizing the patient's perfusion and preparing for or providing patient transport.


1. Consider **Normal Saline IV 20mL/kg** fluid bolus to rule out hypovolemia/dehydration as cause of tachycardia.
2. Initiate ALS intercept and transport as soon as possible. (*Transport can be initiated at any time during this sequence*).
3. If the patient becomes pulseless at any time, refer to the *Resuscitation of Pulseless Rhythms Protocol (V-fib or Pulseless V-tach)*.
4. **ALS providers only: Adenosine (Adenocard): Only for regular and monomorphic 6mg IV {rapid IV push}** if the patient is alert and oriented, has a systolic BP greater than 100mmHg, has a HR greater than 150bpm and is *obviously* not in atrial fibrillation or atrial flutter.
 - If no response after **1-2 minutes**, administer **12mg IV {rapid IV push}**.
 - If no response after **1-2 additional minutes**, administer a repeat dose of **12mg IV {rapid IV push}**.
6. **ALS providers only: Amiodarone: 150mg IV administered over 10 minutes** if the rhythm is regular and monomorphic. Administration may be repeated as needed if rhythm recurs.
7. **ALS providers only: Midazolam (Versed): 2mg IV/IO** for patient comfort during synchronized cardioversion. Re-check vital signs 5 minutes after administration. May repeat dose one time if systolic BP > 100mmHg and respiratory rate is > 10 rpm. Additional doses require Medical Control order. **Midazolam (Versed):** Intranasal if unable to obtain IV access. (*See intranasal dosing sheet*).
8. **ALS Providers only: Synchronized Cardioversion:** If the patient has an altered level of consciousness, diaphoresis, chest pain or discomfort, pulmonary edema and/or is hypotensive:
 - a) Synchronized cardioversion at **100 Joules**** if tachycardia persists.
 - b) Synchronized cardioversion at **200 Joules**** if tachycardia persists.

- c) Synchronized cardioversion at **300 Joules**** if tachycardia persists.
 - d) Synchronized cardioversion at **360 Joules**** if tachycardia persists.
9. **Contact Medical Control** as soon as possible.
10. If the patient becomes pulseless at any time, refer to the *Resuscitation of Pulseless Rhythms Protocol (V-fib or Pulseless V-tach)*.

**Or biphasic equivalent

Critical Thinking Elements

- Monitor the patient for respiratory depression when administering sedatives.
- Monitor respiratory status, SPO2 and or Waveform Capnography if available.
- Factors to consider during the assessment of the patient with tachycardia include: patient health & physical condition, trauma or injury related to the event, current medications and medical history.
- Assess for underlying causes (*e.g.* hypovolemic shock) and treat according to protocol.
- If the patient becomes pulseless at any time, refer to the “V-fib and Pulseless V-tach” section of the *Resuscitation of Pulseless Rhythms Protocol*.
- The goal of the EMT-B is to obtain a 12-Lead EKG and transmit it to the receiving hospital as soon as possible.
- 10 minutes is the goal for EKG to be performed at all levels.
- Monomorphic Ventricular Tachycardia means the appearance of all beats match each other.

	Peoria Area EMS System Prehospital Care Manual	Medical Protocols	Page
Effective Oct 1, 2021	AICD Automated Implanted Defibrillator		93

First Responder & BLS Care should be focused on assessing the situation and initiating routine patient care to treat for shock.


1. Render initial care in accordance with the *Universal Patient Care Protocol*.
2. **Oxygen:** 15 L/min via non-rebreather mask or 6 L/min via nasal cannula if the patient cannot tolerate a mask.
3. Initiate ALS intercept and transport as soon as possible.

ILS & ALS Care should be directed at continuing or establishing care, continuing EMR and BLS care, conducting a thorough patient assessment, stabilizing the patient's perfusion and preparing for or providing patient transport.

1. **Ondansetron (Zofran):** 4mg PO orally disintegrating tablet for nausea and vomiting
2. **Fentanyl: 50mcg IV**, over 2 minutes for pain. Fentanyl 50mcg IV may be repeated every **5 minutes** to a total of 200mcg.
Fentanyl: 50mcg IM if unable to establish IV access- IN (See **Intranasal Fentanyl Dosing Chart Pg. 50**)
3. Initiate ALS intercept and transport as soon as possible (*transport can be initiated at any time during this sequence*) and contact the receiving hospital as soon as possible.

Critical Thinking Elements

- Any patient who has been shocked by an AICD should be strongly encouraged to seek medical attention and closely monitored en route regardless of patient condition.
- If the AICD is malfunctioning, alert Medical Control as early as possible so that a round magnet can be available upon arrival.
- If a patient is unresponsive and pulseless, CPR must be initiated. If the AED recognizes a shockable rhythm, the shock should be delivered (even though the patient has an AICD).
- Avoid placing the Quick Combo pad or Fast Patches directly over the AICD unit as this could damage the device and reduce the efficacy of external defibrillation.
- Slightly alter pad placement if initial defibrillation is unsuccessful.
- **In patients with known renal failure, the Fentanyl dose must be reduced to 25mcg. The dose may be repeated one time to a maximum dose of 50mcg.**
- An implanted cardiac defibrillator (AICD) is a device that delivers an internal defibrillation (shock) whenever the patient's heart rate exceeds defined limits for > 10 seconds. Persons in contact with the patient at the time the device delivers the defibrillation will receive a shock of approximately 3 Joules. This energy level constitutes **NO DANGER** to EMS personnel.
- Avoid use of Zofran in patients with congenital long QT syndrome as these patients are at particular risk for Torsades de Pointes

	Peoria Area EMS System Prehospital Care Manual	Medical Protocols	Page
Effective Oct 1, 2021	Suspected Stroke Protocol		94

A stroke or “brain attack” is a sudden interruption in blood flow to the brain resulting in neurological deficit. It affects 750,000 Americans each year, is the 3rd leading cause of death and is the leading cause of adult disability. All levels should perform a FAST exam as soon as possible and contact the receiving facility early. The most common causes of a stroke are:

- Cerebral thrombosis (a blood clot obstructing the artery).
- Cerebral embolus (a mass or air bubble obstructing the artery).
- Cerebral hemorrhage (ruptured artery / ruptured aneurysm).

First Responder & BLS Care should be focused on assessing the situation and initiating routine patient care.


4. Render initial care in accordance with the *Universal Patient Care Protocol*.
5. **Oxygen: 15 L/min** via non-rebreather mask or 6 L/min via nasal cannula if the patient cannot tolerate a mask to maintain SpO₂ <94%.
6. **BLS providers:** Obtain **12-Lead EKG** and transmit to receiving hospital as soon as possible.
3-Lead monitoring is not in the scope of the EMT-B
7. Perform **blood glucose test**.
8. **Oral Glucose: 15g PO** if the patient’s blood sugar is <60mg/dL, the patient is alert to verbal stimuli, is able to sit in an upright position, has good airway control and has an intact gag reflex.
9. **Glucagon: 1mg IM or 2mg IN** (1mg per nostril) if blood sugar is less than 60mg/dL, the patient is unresponsive and/or has questionable airway control or absent gag reflex.
10. **Narcan: 2mg IN** (1mg per nostril) if suspected narcotic overdose with respiratory depression (\leq 8 breaths per minute).
11. Initiate ALS intercept, contact the receiving facility, and transport as soon as possible.

ILS & ALS Care should be directed at continuing or establishing care, continuing EMR and BLS care, conducting a thorough patient assessment, stabilizing the patient’s perfusion and preparing for or providing patient transport.

- **Dextrose 50%: 25g IV or D10:** 250ml IV bolus WO if blood sugar is < 60mg/dL **or** 60-80mg/dL & patient is symptomatic.
- Perform a 2nd **blood glucose level test** to re-evaluate blood sugar 5 minutes after administration of Dextrose or Glucagon. Repeat Dextrose if BG is still < 60mg/dL.
- Initiate ALS intercept if needed and transport as soon as possible.
- Contact the receiving hospital as soon as possible or Medical Control if necessary.

Critical thinking:

- Determine and document the last time the patient was observed as presenting to their normal.
- IV tPA may be given at the hospital up to 360 minutes (6 hours) after symptoms present.
- Place the head of the cot at a 30 degree angle to facilitate better perfusion to the brain.
- Communicate to the receiving facility asap to declare a stroke alert.
- **Atropine** should not be given to possible stroke patients, contact medical control.

	Peoria Area EMS System Prehospital Care Manual	Medical Protocols	Page
Effective Oct 1, 2021	Respiratory Distress Protocol		95

Correct management of the patient in respiratory distress is dependent on identifying the etiology of the distress and recognizing the degree of the patient’s distress. Signs and symptoms of respiratory distress may include:

- Shortness of breath
- Difficulty speaking
- Altered mental status
- Diaphoresis
- Use of accessory muscles/ Retractions
- Respiratory rate less than 8 or greater than 24

If the etiology is questionable or your assessment does not provide a clear etiology, **consult Medical Control** for direction in patient care.

Asthma/ COPD: In addition to general signs & symptoms of respiratory distress, patients may present with inspiratory & expiratory wheezing and/or “tight” lung sounds with decreased air movement.

First Responder Care should be focused on assessing the situation and initiating routine patient care to treat for shock.

1. Render initial care in accordance with the *Universal Patient Care Protocol*.
2. **Oxygen: 15 L/min** via non-rebreather mask or 6 L/min via nasal cannula if the patient cannot tolerate a mask.
3. **Proventil (Albuterol): 2.5mg** in 3mL normal saline via nebulizer over 15 minutes.

BLS & ILS Care should be directed at conducting a thorough patient assessment, continuing EMR care, initiating routine patient care to treat for shock and preparing the patient for or providing transport.

1. **Proventil (Albuterol): 2.5mg** in 3mL normal saline **mixed with Ipratropium (Atrovent): 0.5mg** via nebulizer over 15 minutes. May repeat Albuterol 2.5mg with Atrovent 0.5mg every **15 minutes** as needed (**with Medical Control order**).
2. Initiate waveform capnography and confirm possible shark fin waves
3. **CPAP:** If the systolic BP > 100mmHg
 - If the systolic BP is between 90-100mmHg, **contact Medical Control** prior to initiating CPAP
 - **Do Not** initiate CPAP in the systolic BP is less than 90mmHg
4. Initiate ALS intercept if needed and transport as soon as possible.
5. Contact receiving hospital as soon as possible or Medical Control if necessary.

ALS Care should be directed at continuing or establishing care, continuing EMR, BLS, & ILS care, conducting a thorough patient assessment, stabilizing the patient’s perfusion and preparing for or providing patient transport.

1. Patients with persistent respiratory distress consider **Solu-Medrol: 125mg IV** push
2. **Epinephrine 1:1000: 0.3mg IM** if the patient is suffering status asthmaticus and does not improve with DuoNeb treatment.

- Special consideration should be given to administering Epinephrine if the patient is > 40 years old, has an irregular heart rate, has a heart rate > 150bpm or has a history of heart disease or hypertension. *Consult Medical Control prior to administration if the patient meets any of these criteria.*
3. **Magnesium Sulfate:** 2 grams in 50/100ml of D5W/NS over 10-20 min.
 4. Transport and contact the receiving hospital as soon as possible.

CHF/ Pulmonary Edema: In addition to general signs & symptoms of respiratory distress, patients may present with rales (or “crackles”), pedal edema, distended neck veins (JVD), orthopnea and tripod positioning.

First Responder Care should be focused on assessing the situation and initiating routine patient care to treat for shock.

1. Render initial care in accordance with the *Universal Patient Care Protocol*.
2. **Oxygen:** 15 L/min via non-rebreather mask or 6 L/min via nasal cannula if the patient cannot tolerate a mask.

BLS Care should be directed at conducting a thorough patient assessment, continuing EMR care, initiating routine patient care to treat for shock and preparing the patient for or providing transport.

1. **Nitroglycerin (NTG): 0.4mg SL.** May repeat every 3-5 minutes to a total of 3 doses (if systolic BP remains > 100mmHg).
2. Initiate waveform capnography
3. **CPAP:** If systolic BP > 100mmHg
 - If the systolic BP is between 90-100mmHg, **contact Medical Control** prior to initiating CPAP
 - **Do not** initiate CPAP if the systolic BP is < 90mmHg
6. Obtain **12-Lead EKG** and transmit to the receiving hospital as soon as possible.
7. Initiate ALS intercept and transport as soon as possible.

ILS & ALS Care should be directed at continuing or establishing care, continuing EMR and BLS care, conducting a thorough patient assessment, stabilizing the patient’s perfusion and preparing for or providing patient transport.

1. **Nitropaste (Nitro-Bid): 1 inch** to anterior chest wall if the patient’s systolic BP is > 100mmHg.

Critical Thinking Elements

- Solu-Medrol should **NOT** be administered to patients with fever, hyperglycemia, and who have the signs and symptoms of sepsis.
- Constant reassessment of the respiratory distress patient is imperative to assure that the patient has adequate ventilation and oxygenation. Closely monitor the patient’s response to treatment rendered.
- Patients in respiratory distress should be transported in an upright position to assist their respiratory effort.
- CPAP is very effective in the treatment of CHF / Pulmonary Edema and should be applied as soon as possible unless contraindicated.
- CPAP should not be initiated on patients with a systolic BP < 90mmHg. CPAP increases intrathoracic pressure and can decrease venous return to the heart (compromising the patient’s perfusion). Consult with Medical Control and use CPAP cautiously if the systolic BP is between 90-100mmHg for the same reason.
- Do not delay CPAP application for administration of Nitroglycerin (*i.e.* you do not need to wait until all three (3) doses of NTG SL have been administered before applying CPAP).

Smoke Inhalation: Is the result of various inhaled components of combustion and direct thermal injury to the airway. Signs and symptoms include: evidence of exposure to fire, stridor, wheezing, acute upper airway obstruction, chemical pneumonia and non-cardiac pulmonary edema. Effects of the exposure may be immediate or delayed several hours.

Carbon monoxide (CO) poisoning is a common secondary complication to smoke inhalation. Direct exposure to the gas is also common (especially in winter months). Signs and symptoms include: evidence of exposure to fire or natural gases produced by incomplete combustion, headache, dizziness, tinnitus, nausea, weakness, chest pain and ALOC.

Suspect cyanide toxicity in patients who were in enclosed spaces during a fire and have soot in the nares or oropharynx and exhibit altered mental status.


- Disorientation, confusion, and severe headache are potential indications of cyanide poisoning IN THE SETTING of smoke inhalation.
- Hypotension without other obvious cause IN THE SETTING of smoke inhalation increases the likelihood of cyanide poisoning.

First Responder, BLS, & ILS Care should be focused on assessing the situation and initiating routine patient care to assure that the patient has a patent airway, is breathing and has a perfusing pulse as well as beginning treatment for shock.

1. Render initial care in accordance with the *Universal Patient Care Protocol*.
2. **Oxygen: 15 L/min** via non-rebreather mask or 6 L/min via nasal cannula if the patient cannot tolerate a mask. Be prepared to support the patient's respirations with BVM if necessary.
3. **EMR: Proventil (Albuterol): 2.5mg** in 3mL of normal saline via nebulizer over 15 minutes.
4. Initiate ALS intercept and transport as soon as possible.
5. **BLS & ILS only: Proventil (Albuterol): 2.5mg** in 3mL normal saline **mixed with Ipratropium (Atrovent): 0.5mg** via nebulizer over 15 minutes. May repeat Albuterol 2.5mg with **Atrovent 0.5mg** in **15 minutes (with Medical Control order)**. In-line nebulizer may be utilized if patient is unresponsive or in respiratory arrest.
6. Contact the receiving hospital as soon as possible or Medical Control if necessary and consider intercept.

ALS Care should be directed at continuing or establishing care, continuing EMR, BLS, & ILS Care, conducting a thorough patient assessment, stabilizing the patient's perfusion and preparing for or providing patient transport.

1. **If cardiac or respiratory arrest, seizing, or SBP <80 with signs of hypoperfusion after exposure to smoke in an enclosed space:**
 - **CyanoKit (Hydroxycobalamin) 5g IV** over 15 minutes. If signs and symptoms persist, a repeat dose can be administered. The infusion rate for the second dose is usually 15 minutes to 2 hours. (Depending on clinical condition). See medication sheet for questions.
2. Transport as soon as possible.
3. Contact the receiving hospital as soon as possible.

	Peoria Area EMS System Prehospital Care Manual	Medical Protocols	Page
Effective Oct 1, 2021	Altered level of Consciousness Protocol		98

A patient with an altered level of consciousness (ALOC) may present with a variety of symptoms from minor thought disturbances & confusion to complete unresponsiveness. The causes of ALOC include cardiac emergencies, hypoxia, hypoglycemia/diabetic emergencies, epilepsy/seizures, alcohol/drug related emergencies, trauma, sepsis, stroke or any other condition which disrupts brain perfusion. ALOC can be the presenting symptom for many disease processes. Syncope is another type of ALOC and is characterized as an acute, temporary suspension of consciousness. Near-syncope (feeling faint) is a sensation of impending loss of consciousness that may rapidly progress to unconsciousness.

First Responder & BLS Care should be focused on assessing the situation and initiating routine patient care to assure that the patient has a patent airway, is breathing and has a perfusing pulse as well as beginning treatment for shock.


1. Render initial care in accordance with the *Universal Patient Care Protocol*.
2. **Oxygen: 15 L/min** via non-rebreather mask or 6 L/min via nasal cannula if the patient cannot tolerate a mask.
3. Perform **blood glucose test**.
4. **Oral Glucose: 15g PO** if the patient's blood sugar is <60mg/dL, the patient is alert to verbal stimuli, is able to sit in an upright position, has good airway control and has an intact gag reflex.
5. **BLS only: Glucagon: 1mg IM or 2mg IN** (1mg per nostril) if blood sugar is less than 60mg/dL, the patient is unresponsive and/or has questionable airway control or absent gag reflex.
6. **Narcan: 2mg IN** (1mg per nare) if suspected narcotic overdose with respiratory depression (≤ 8 breaths per minute).
7. Obtain **12-Lead EKG** and transmit to receiving hospital if non-opiate overdose (or opiate overdose unresponsive to Narcan) or if cause of ALOC is uncertain.
8. Initiate ALS intercept if needed and transport as soon as possible & contact the receiving hospital as necessary.

ILS & ALS Care should be directed at continuing or establishing care, continuing EMR and BLS care, conducting a thorough patient assessment, stabilizing the patient's perfusion and preparing for or providing patient transport.

- **Dextrose 50%: 25g IV or D10: 25ml IV bolus WO** if blood sugar is < 60mg/dL or 60-80mg/dL & patient is symptomatic.
- Perform a 2nd **blood glucose level test** to re-evaluate blood sugar 5 minutes after administration of Dextrose or Glucagon. Repeat Dextrose if BG remains < 60mg/dL.

Critical Thinking Elements

- Look for Medic Alert tags & consider possible C-spine injury and follow C-spine precautions.
- Be prepared for possible vomiting after administration of Glucagon.
- Vitals and GCS should be recorded every 5 minutes.
- After administration of Dextrose, allow 2 minutes before administration of Narcan.
- No 12-Lead EKG is necessary for known etiologies such as hypoglycemia, opiate overdose responsive to Narcan or febrile illness.
- **ILS / ALS:** If a patient refuses transport after administration of D₅₀ (& is CA+Ox4), the call may be treated as a low risk refusal as long as the following criteria are met (and documented in the PCR):
 - The cause of the patient's hypoglycemia can be easily explained (*e.g.* patient took insulin but did not eat).
 - The patient has no other complaints and no other issues are identified after a thorough evaluation (including a full assessment, vitals and repeat blood sugar) & EMS advises patient/family that the patient needs to consume foods containing complex carbohydrates & protein within the next 15 minutes (assist patient if needed prior to departing the scene).

	Peoria Area EMS System Prehospital Care Manual	Medical Protocols	Page
Effective Oct 1, 2021	Seizure Protocol		100


A seizure is a temporary, abnormal electrical activity of the brain that results in loss of consciousness, loss of organized muscle tone and presence of convulsions. The patient will usually regain consciousness within 1 to 3 minutes followed by a period of confusion and fatigue (*post-ictal state*). Multiple seizures in a brief time span or seizures lasting more than 5 minutes may constitute status epilepticus and require EMS intervention to stop the seizure. Causes of seizures include: epilepsy, stroke, head trauma, hypoglycemia, hypoxia, infection, a rapid change in core body temperature (*e.g.* febrile seizure), eclampsia, and alcohol withdrawal or overdose.

First Responder & BLS Care should be focused on assessing the situation and initiating routine patient care to assure that the patient has a patent airway, is breathing and has a perfusing pulse as well as beginning treatment for shock.

1. Render initial care in accordance with the *Universal Patient Care Protocol*.
2. **Oxygen: 15 L/min** via non-rebreather mask or 6 L/min via nasal cannula if the patient cannot tolerate a mask.
3. Perform blood glucose level test.
4. **Oral Glucose: 15g PO** is the patient's blood sugar in <60mg/dL, the patient is alert to verbal stimuli, is able to sit in an upright position, has good airway control and has an intact gag reflex.
5. **BLS only: Glucagon: 1mg IM or 2mg IN** (1mg per nostril) if blood sugar is less than 60mg/dL, the patient is unresponsive and/or has questionable airway control or absent gag reflex.
6. Initiate ALS intercept and **transport without delay.**

ILS & ALS Care should be directed at continuing or establishing care, continuing EMR and BLS Care, conducting a thorough patient assessment, stabilizing the patient's perfusion and preparing for or providing patient transport.

2. If the patient is symptomatic, unresponsive with a questionable gag reflex and a blood sugar less than 60mg/dL consider one of the following. **Dextrose 50%:** 25g IV or **Dextrose 10%:** 250mL bolus administered at Wide Open Rate or **Glucagon:** 1mg IM or (if available) 2mg IN
3. **Narcan: 2mg IV/IM/IN** if no response to Dextrose or Glucagon within 2 and narcotic overdose is suspected. May repeat if no response in 5 minutes.
4. **Midazolam (Versed): 2mg IV** over 1 minute for seizure activity. May repeat Midazolam (Versed) 2mg IV every **5 minutes** as needed to a total of 10mg.
Midazolam (Versed): 5mg IM if the patient is seizing and attempts at IV access have been unsuccessful. May repeat dose one time in **15 minutes** if the patient is still seizing to a total of 10mg. **Midazolam (Versed):** Intranasal if unable to obtain IV access. (See **Versed Intranasal Dosing Sheet Pg. 45**).
5. Transport as soon as possible
6. Contact the receiving hospital as soon as possible

	Peoria Area EMS System Prehospital Care Manual	Medical Protocols	Page
Effective Oct 1, 2021	Acute Abdominal Pain Protocol		101

Abdominal pain may vary from minor discomfort to acute pain. Abdominal pain may indicate inflammation, hemorrhage, perforation, obstruction and/or ischemia of an internal organ. Correct management of the patient in abdominal pain depends on recognizing the degree of distress the patient is suffering and identifying the possible etiology of the distress.

First Responder & BLS Care should be focused on assessing the situation and initiating routine patient care to assure that the patient has a patent airway, is breathing and has a perfusing pulse as well as beginning treatment for shock.

1. Render initial care in accordance with the *Universal Patient Care Protocol*.
2. Allow the patient to remain in a position that is most comfortable.
3. **Oxygen: 15 L/min** via non-rebreather mask or 6 L/min via nasal cannula if the patient cannot tolerate a mask.
4. **Ondansetron (Zofran): 4mg PO** orally disintegrating tablet for nausea and vomiting
5. Initiate ALS intercept if needed and transport as soon as possible.


ILS & ALS Care should be directed at continuing or establishing care, continuing EMR and BLS care, conducting a thorough patient assessment, stabilizing the patient's perfusion and preparing for or providing patient transport.

1. **IV Fluid Therapy: 20mL/kg** fluid bolus if the patient is hypotensive to achieve a systolic BP of at least 100mmHg.
2. **Fentanyl: 50mcg IV**, over 2 minutes for pain. Fentanyl 50mcg IV may be repeated every **5 minutes** to a total of 200mcg.
Fentanyl: 50mcg IM, if unable to initiate IV access. May be repeated as needed to a total of 200mcg.
Fentanyl: IN (See [Intranasal Fentanyl Dosing Chart Pg. 50](#)).
3. **Ondansetron (Zofran): 4mg IV** over 2 minutes for nausea and/or vomiting.
Ondansetron (Zofran): 4mg IM or **4mg PO** orally disintegrating tablet.

Initiate ALS intercept if needed, contact the receiving hospital, & transport as soon as possible.

Critical Thinking Elements

- Monitor respiratory status, SPO2 and or Waveform Capnography when administering Narcotics.
- Assess for leaking or ruptured abdominal aortic aneurysm (AAA). Common signs and symptoms may include previous history un-repaired AAA, abdominal distention, pulsating masses, lower extremity mottling, diaphoresis, anxiety/restlessness and/or sharp "tearing" pain between the shoulder blades or in the lower back.
- Give special attention to female patients of childbearing years. Acute abdominal pain should be considered to be an ectopic pregnancy until proven otherwise.
In patients with known renal failure, the Fentanyl dose must be reduced to 25mcg. The dose may be repeated one time to a maximum dose of 50mcg.
- Avoid use of Zofran in patients with congenital long QT syndrome as these patients are at particular risk for Torsades de Pointes

	Peoria Area EMS System Prehospital Care Manual	Medical Protocols	Page
Effective Oct 1, 2021	Acute Nausea & Vomiting Pain Protocol		102

Acute nausea and vomiting may occur from a variety of illness including, but not limited to:

- Adverse medication effects
- Bowel obstruction
- Increased intracranial pressure
- Intraabdominal emergencies
- Myocardial infarction
- Other cardiac events such as tachydysrhythmias



An attempt at determining potential causes of isolated nausea or vomiting must be made in order to identify potential life threatening conditions.

First Responder & BLS Care should be focused on assessing the situation and initiating routine patient care to assure that the patient has a patent airway, is breathing and has a perfusing pulse as well as beginning treatment for shock.

1. Render initial care in accordance with the *Universal Patient Care Protocol*.
2. Place the patient in an upright or lateral recumbent position as tolerated.
3. Monitor airway status in vomiting patients as aspiration may occur. Reposition the patient as necessary to maintain a patent airway.
4. **Oxygen: 15 L/min** via non-rebreather mask or 6 L/min via nasal cannula if the patient cannot tolerate a mask. **Note:** Oxygen by mask may trap secretions and compromise the airway if the patient is actively vomiting.
5. Perform blood glucose test.
6. **Oral Glucose: 15g PO** if the patient's blood sugar is <60mg/dL, the patient is alert to verbal stimuli, is able to sit in an upright position, has good airway control and has an intact gag reflex.
7. Perform a 2nd blood glucose level test to re-evaluate blood sugar 5 minutes after administration of Oral Glucose. If blood sugar remains <60mg/dL, administer a 2nd dose of **Oral Glucose** (15g).
8. **BLS Only: Glucagon: 1mg IM or 2mg IN** (1mg per nostril) if blood sugar is < 60mg/dL, the patient is unresponsive and/or has questionable airway control or absent gag reflex.
9. **BLS Only: Ondansetron (Zofran): 4mg PO** orally disintegrating tablet for nausea and vomiting.
10. Initiate ALS intercept if needed, contact the receiving hospital, and transport as soon as possible.

ILS & ALS Care should be focused on continuing or initiating an advanced level of care, continuing EMR and BLS Care, identifying potential serious conditions and stabilizing airway and circulation where appropriate.

1. **IV Fluid Therapy: 20mL/kg** fluid bolus if the patient is hypotensive to achieve a systolic BP greater than 100mmHg.
2. Perform **blood glucose level test**.
3. **Dextrose 50%: 25g IV or D10 250ml IV bolus WO** if blood sugar is < 60mg/dL.
4. **Ondansetron (Zofran): 4mg PO** orally disintegrating tablet
5. **Ondansetron (Zofran): 4mg IV** over 2 minutes or **Ondansetron (Zofran): 4mg IM**
6. Perform a 2nd **blood glucose level test** to re-evaluate blood sugar 5 minutes after administration of Dextrose or Glucagon. Repeat Dextrose if BS is < 60mg/dL.
7. Initiate ALS intercept if needed, contact the receiving hospital, and transport as soon as possible.

		Peoria Area EMS System Prehospital Care Manual	Medical Protocols	Page 103
Effective Oct 1, 2021		Septic Shock Protocol		

History

- Age: (Must be ≥ 18)
- Duration/Severity of Fever
- Past Medical History: (Pneumonia, Urinary Tract Infection, Meningitis, Cellulitis, Decubitus Ulcers, recent hospitalization/surgical procedures)
- Medications
- Immunocompromised: (transplant, HIV/AIDS, diabetes, cancer)

Differential Diagnosis

- Cancer/Tumors/Lymphomas
- Medication or Drug Reaction
- Hyperthyroid
- Meningitis
- Hyperglycemia

Signs & Symptoms


- Heart Rate > 90
- Respiratory Rate > 22
Or PaCO₂ < 32mmHG
Or Mechanical Ventilation
- Systolic Blood Pressure ≤ 90mmHg
- Hyperthermia or Hypothermia
Thermometer: > 100.4°F/38°C or < 96.8°F/36°C
No Thermometer: Is the skin Hot or Cold?
- Hyperglycemia / Hypoglycemia
- Altered Mental Status / Decreased Level of Consciousness
- Already treating infection

2 or more signs and symptoms in addition to positive history indicates likelihood of Septic Shock and must be treated aggressively to prevent poor organ perfusion. Early notification to the receiving facility is a must to declare a Sepsis alert.

Attempt to maintain a Systolic BP >90 mmHg or Mean Arterial Pressure (MAP) >65 mmHg.

ILS & ALS Care should be directed at continuing or establishing care, continuing EMR and BLS Universal Patient Care, conducting a thorough patient assessment, stabilizing the patient's perfusion and preparing for or providing patient transport.

1. **IV Fluid Therapy: 20mL/kg** fluid bolus if the patient is hypotensive to achieve a systolic BP greater than 90mmHg. (Avoid if signs of heart failure present, including dyspnea, JVD, orthopnea, rales).
2. **Norepinephrine:** infusion (this medication is system optional for prolonged scene times or transports): 1-20 mcg/min. Start at 5 mcg/min, titrate every 5-10 min to maintain SBP > 90.
 - a. Administer through a confirmed patent, large bore (>18 gauge) IV in a proximal vein. (Antecubital preferred), as this medication may cause limb necrosis if extravasation occurs.
 - b. If extravasation occurs, notify stop medication, and notify receiving facility immediately.
 - c. Monitor blood pressure every 5 minutes
3. **Push-dose epinephrine (10 mcg/mL)** (for short transports see Push Dose Epi Procedure Pg. 66)

	Peoria Area EMS System Prehospital Care Manual	Medical Protocols	Page
Effective Oct 1, 2021	Anaphylaxis Protocol		104

Allergic reactions can be triggered by virtually any allergen. An allergen is a substance (usually protein-based) which produces a hypersensitive reaction. Drugs, blood products, foods and envenomation's are examples of substances which may produce hypersensitive reactions.

Signs & symptoms of a hypersensitive reaction may range from isolated hives, wheezing, shock, to cardiac arrest. Anaphylaxis is a life threatening reaction that requires prompt recognition and intervention. An anaphylactic reaction may result in airway compromise and circulatory collapse within minutes.

First Responder & BLS Care should be focused on assessing the situation and initiating routine patient care to assure that the patient has a patent airway, is breathing and has a perfusing pulse as well as beginning treatment for shock.

1. Render initial care in accordance with the *Universal Patient Care Protocol*.
2. **Oxygen: 15 L/min** via non-rebreather mask or 6 L/min via nasal cannula if the patient cannot tolerate a mask. Be prepared to support the patient's respirations with BVM if necessary.
3. ***Epinephrine: 0.3mg IM** if the patient has a history of allergic reactions and/or is suffering from hives, wheezing, hoarseness, hypotension, ALOC or indicates a history of anaphylaxis. ***(Epi Pen is Expanded Scope for the EMR)**
4. **Proventil (Albuterol): 2.5mg** in 3mL normal saline via nebulizer over 15 minutes.
BLS only: Ipratropium (Atrovent): 0.5mg via nebulizer over 15 minutes. May repeat **Albuterol 2.5mg with Atrovent 0.5mg** every 15 minutes. In-line nebulizer may be utilized if patient is unresponsive or in respiratory arrest.
5. **BLS only: Benadryl: 50mg PO** for severe itching and/or hives.
6. **Contact Medical Control** as soon as possible.

ILS and ALS Care should be directed at continuing or establishing care, continuing EMR and BLS care, conducting a thorough patient assessment, stabilizing the patient's perfusion and preparing for or providing patient transport.

1. Render initial care in accordance with the *Universal Patient Care Protocol*.
2. **Epi 1:1,000: 0.3mg IM** (adult dose) 0.15mg (pediatric dose)
3. **Benadryl: 50mg PO/ IV/ IM** for severe itching and hives.
4. **IV Fluid Therapy: 20mL/kg** fluid bolus if the patient is hypotensive to achieve a systolic BP of at least 100mmHg.
5. **ALS Only: Solu-Medrol: 125mg IV**
6. Transport as soon as possible.
7. Contact the receiving hospital as soon as possible.



OSF
HEALTHCARE

Peoria Area EMS System Prehospital Care Manual


Adult Trauma
Protocols

Effective Oct 1, 2021

Adult Trauma Protocols

105

PAEMS Adult Trauma Protocols

	Peoria Area EMS System Prehospital Care Manual	Trauma Protocols	Page
Effective Oct 1, 2021	Traumatic Shock Protocol		106

Conditions that may indicate impending shock include:

- Significant mechanism of injury
- Tender and/or distended abdomen
- Pelvic instability
- Bilateral femur fractures


“Load & Go” with any trauma patient with signs and symptoms of shock – on scene treatments should be minimal. Conduct a *Primary Survey*, manage the airway, take C-spine precautions & immobilize and control any life-threatening hemorrhage. Contact Medical Control as early as possible.

EMR & BLS Care should be focused on assessing the situation and initiating routine patient care to assure that the patient has a patent airway, is breathing and has a perfusing pulse as well as beginning treatment for shock.

1. Render initial care in accordance with the *Universal Patient Care Protocol* and *Universal Trauma Care Protocol*.
2. **Oxygen: 15 L/min** via non-rebreather mask or 6 L/min via nasal cannula if the patient cannot tolerate a mask. Be prepared to support the patient’s respirations with BVM if necessary.
3. Control bleeding using direct pressure, pressure dressings and pressure points.
4. Initiate ALS intercept and transport as soon as possible.
5. Contact Medical Control as soon as possible.

ILS & ALS Care should be directed at continuing or establishing care, continuing EMR and BLS Care, conducting a thorough patient assessment, stabilizing the patient’s perfusion and preparing for or providing patient transport.

1. **IV Fluid Therapy: 20mL/kg** fluid bolus if needed to obtain a systolic BP of at least 100mmHg (avoid if signs of heart failure present, including dyspnea, JVD, orthopnea, rales).
2. **Norepinephrine infusion** (this medication is system optional for prolonged scene times or transports): 1-20 mcg/min. Start at 5 mcg/min, titrate every 5-10 min to maintain SBP > 90.
 - a. Administer through a confirmed patent, large bore (>18 gauge) IV in a proximal vein. (Antecubital preferred), as this medication may cause limb necrosis if extravasation occurs.
 - b. If extravasation occurs, notify stop medication, and notify receiving facility immediately.
 - c. Monitor blood pressure every 5 minutes
2. **Push-dose epinephrine (10 mcg/mL)** (for short transports)
 - a. To make: Draw up 1 mL of 1:10,000 cardiac epinephrine into a 10 mL syringe, and then draw up 9 mL of normal saline.
 - b. The syringe should be mixed by rolling it between the palms prior to administration.
3. Administration: **0.5-1 mL** slow IV infusion of push-dose epinephrine every 1-5 minutes to maintain SBP > 90
 - a. Caution while giving pressors in the setting of MI as they may worsen ischemia/infarct.
4. Transport as soon as possible (transport can be initiated at any time during this sequence) and Contact Medical Control as necessary.
5. Initiate ALS intercept if needed, transport as soon as possible, and contact medical control.

	Peoria Area EMS System Prehospital Care Manual	Trauma Protocols	Page
Effective Oct 1, 2021	Burn Protocol		107

Burn injuries vary depending on the *type* of burn (thermal, electrical, chemical) and the *amount* of exposure (time and depth). Burn injuries range from localized redness to deep tissue destruction and airway compromise. Signs of burn injury include: blisters, pain, tissue destruction, charred tissue and singed hair. The primary goal in the treatment of the burn patient is to stop the acute burning process by removing the patient from direct contact with the source of the burn and maintaining the patient's body fluids. Special attention should be given to limit further pain and damage of the burn to the patient. However, burn care should not interfere with lifesaving measures.

First Responder & BLS Care should be focused on assessing the situation and initiating routine patient care to assure that the patient has a patent airway, is breathing and has a perfusing pulse as well as beginning treatment for shock.

1. Render initial care in accordance with the *Universal Trauma Patient Care Protocol*.
2. Make sure the scene is safe to enter.
3. **Oxygen: 15 L/min** via non-rebreather mask or 6 L/min via nasal cannula if the patient cannot tolerate a mask. Be prepared to support the patient's respirations with BVM if necessary.
4. **Initiate transport asap and consider ALS intercept.**
5. **THERMAL BURN TREATMENT:**
 - a) If the burn occurred within the last 20 minutes, reverse the burning process and cool the area by flushing the area with **1 Liter of sterile saline** (or sterile water if sterile saline is not available). The goal of cooling is to extinguish the burning process – not to systemically cool the patient. Fluid application should be held to a minimum and discontinued if the patient begins shivering.
 - b) Remove jewelry and loose clothing. Do not pull away clothing that is stuck to the burn.
 - c) Cover the wound with sterile dressings***
 - d) Place a sterile burn sheet on the stretcher. If the patient's posterior is burned, place a sterile burn pad on top of the sheet with the absorbent side toward the patient.
 - e) Place patient on the stretcher.
 - f) Cover the patient with additional sterile burn sheets and blanket to conserve body heat.
6. **ELECTRICAL BURN TREATMENT:**
 - a) Assure that the power service has been cut off and remove the patient from the source of electricity.
 - b) Fully immobilize the patient due to forces of electrical current and possible trauma.
 - c) Assess for entry and exit wounds. No cooling or flushing is necessary due to the type of burn.
 - d) Cover the burn with dry, sterile dressings.
 - e) Closely monitor the patient.
7. **CHEMICAL BURN TREATMENT:**
 - a) Consider possible scene and patient contamination and follow agency safety procedures.
 - b) Note which chemical agent caused the burn and obtain the MSDS for that chemical (if possible).
 - c) The patient's clothing should be completely removed to prevent continued exposure and the patient decontaminated **prior to** being placed in the ambulance for transport.
 - d) **Dry chemical powder** should be brushed off before applying water.

- e) Irrigate the patient with sterile water and if the MSDS indicates use of water will not cause an adverse reaction. Body parts should be flushed for at least 1-2 minutes. Do not use sterile saline on chemical burns.
- f) Irrigate burns to the eye with sterile water for at least 20 minutes. Alkaline burns should receive continuous irrigation throughout transport.

ILS & ALS Care should be directed at continuing or establishing care, continuing EMR and BLS Care, conducting a thorough patient assessment, stabilizing the patient’s perfusion and preparing for or providing patient transport.

1. Be prepared to intubate if necessary.
2. **IV Fluid Therapy: 20mL/kg** fluid bolus. Repeat if necessary.
3. Manage the patient’s pain referencing the Pain Protocol.
4. Transport and **Contact Medical Control** as soon as possible for significant burns.

Fentanyl (ALS & ILS)	50 mcg IO, over <u>2 minutes</u> for pain. Fentanyl 50 mcg IO may be repeated every 5 minutes to a total of 200 mcg.
	May administer Fentanyl 50 mcg IM or IN. May be repeated as needed to a total of 200 mcg. (See dosing sheets for IN)


If the patient is **hemodynamically unstable** due to traumatic injury the provider should manage the patient’s pain by using the following medication.

Ketamine IV/IO	0.3mg/kg slow IV/IO Push every 20 minutes to a maximum 3 doses
Ketamine IM	0.5mg/kg slow IM Push

The most common adverse effects of Ketamine are hallucinations, anxiety, dysphoria and euphoria.

Critical Thinking Elements

- Monitor respiratory status, SPO2 and or Waveform Capnography if available.
- *****WaterJel®** may be used for **THERMAL BURNS** (after the burn has been irrigated according to protocol) if it is available:
 1. Open the foil package, unfold dressing and apply to burn. **NOTE:** Do not remove burned clothing - apply gel-soaked dressing directly on top.
 2. Pour excess gel from the foil package directly onto the burn dressing or surrounding skin.
 3. Loosely wrap sterile gauze over the dressing to hold it in place.
- WaterJel® helps reduce pain from burns and cools the skin to help prevent burn progression and helps protect the burn against airborne contamination. It is the only approved commercial burn care product in the Peoria Area EMS System.
- BurnJel® contains Lidocaine and may **NOT** be used in the Peoria Area EMS System.
- Treat other symptoms or trauma per the appropriate protocol (*e.g.* if someone suffers from smoke inhalation along with being burned, refer to the *Smoke Inhalation Protocol*).
- IV access should not be obtained through burned tissue unless no other site is available.
- Do not delay transport of a “Load and Go” trauma patient to care for burns.
- For chemical/powder burns, be aware of inhalation hazards and closely monitor for changes in respiratory status.

	Peoria Area EMS System Prehospital Care Manual	Trauma Protocols	Page
Effective Oct 1, 2021	Crush Syndrome Protocol		109

Crush Syndrome occurs during prolonged entrapment where the victim's body tissue becomes poorly perfused. Lactic acid may build up in the affected tissues and when the circulation is improved the heart may suffer dysrhythmias and severe electrolyte imbalances.


EMR Care, BLS Care, ILS Care, ALS Care

Safety is paramount. Do not place yourself in harm's way. Access the patient only if it can be done safely.

1. Place a tourniquet proximal to the crush injury as close to the injury as possible.
2. Render care following the Universal Trauma Care procedure.
3. Record the patient's body temperature and treat for possible shock.
4. Call for ALS to meet on scene if possible-at minimum ALS intercept en route.
5. **ILS & ALS** initiate 2 large bore IV's if possible and begin IV fluid bolus of a minimum 500cc normal saline in order to maintain a Systolic blood pressure >90mmHg.
6. **ALS Only** administer **50mEq Sodium Bicarbonate mixed in 1000cc normal saline** at wide open rate.
7. Monitor the patient continuously and contact medical control as soon as possible.

Once the crush is relieved monitor the patient for cardiac dysrhythmias and treat per proper protocols.

Be prepared for sudden shifts in hemodynamic status when the crush is relieved and treat per proper protocols.

	Peoria Area EMS System Prehospital Care Manual	Trauma Protocols	Page
Effective Oct 1, 2021	Hazardous Materials Protocol		110

Injuries from hazardous materials incidents vary depending on the *manner* of exposure (inhalation, ingestion, injection or absorption), the *type* of material involved (acids, ammonia, chlorine, hydrocarbon solvents, sulfides, organophosphates) and the *amount* of exposure (time & concentration).

Due to the magnitude and multiplicity of hazardous materials, this protocol focuses on a general approach to the patient involved in a hazardous materials incident. The substance container may have vital information for resuscitation of an exposed patient. Communication with Medical Control is the best way to obtain rapid and accurate advice on treatment guidelines for specific materials.


First Responder & BLS Care should be focused on assessing the situation and initiating routine patient care to assure that the patient has a patent airway, is breathing and has a perfusing pulse as well as beginning treatment for shock. Remain uphill, upwind, upstream, and upgrade of the incident. Stay out of the “Hot Zone” unless trained, equipped and authorized to enter.

1. Render initial care in accordance with the *Universal Patient Care Protocol*.
2. Look for possible scene and patient contamination. Follow agency safety procedures.
3. Notify IEMA if needed at 1-800-782-7860.
4. The patient’s clothing should be completely removed to prevent continued exposure and the patient decontaminated **prior to** being placed in the ambulance for transport.
5. **Oxygen: 15 L/min** via non-rebreather mask or 6 L/min via nasal cannula if the patient cannot tolerate a mask. Be prepared to support the patient’s respirations with BVM if necessary.
6. **Proventil (Albuterol): 2.5mg** in 3mL normal saline **mixed with BLS only: Ipratropium (Atrovent): 0.5mg** via nebulizer over 15 minutes if the patient has been exposed to an irritant gas (acids, ammonia, chlorine, carbon monoxide). Repeat **Albuterol 2.5mg with Atrovent 0.5mg** in **15 minutes** as needed. **(With Medical Control Order)**.
7. Initiate ALS intercept if needed and transport as soon as possible. Be alert for suspected organophosphate poisoning (OPP). Signs & symptoms include “SLUDGE” (salivation, lacrimation, urination, defecation, gastroenteritis & emesis).
8. **Contact Medical Control** and make sure the receiving hospital is aware of **(prior to arrival at the facility)** the patient’s exposure to hazardous materials and what decontamination procedures were followed at the scene.

ILS & ALS Care should be directed at continuing or establishing care, continuing EMR and BLS Care, conducting a thorough patient assessment, stabilizing the patient’s perfusion and preparing for or providing patient transport.

Remain uphill, upwind of the incident. Stay out of the “Hot Zone” unless trained, equipped and authorized.

1. **Atropine: 2mg IV** or IM **(with Medical Control order only)** if suspected organophosphate poisoning (OPP) and signs & symptoms of “SLUDGE” are present (salivation, lacrimation, urination, defecation, gastroenteritis & emesis). Repeat **Atropine 2mg IV** or IM every **5 minutes (with Medical Control order)** or until signs & symptoms of “SLUDGE” subside.
2. Initiate ALS intercept and transport as soon as possible. **Contact Medical Control** and make sure the receiving hospital is aware of the patient’s exposure to hazardous materials **(prior to arrival at the facility)** and what decontamination procedures were followed at the scene.

	Peoria Area EMS System Prehospital Care Manual	Trauma Protocols	Page
Effective Oct 1, 2021	Heat and Cold Emergencies Protocol		111

Injury and illness from environmental exposure varies depending on the *manner* of exposure (wet or dry) and the *amount* of exposure (time, temperature, wind chill factor, and ambient air). Cold weather emergencies range from localized frostbite to severe hypothermia with unresponsiveness and unconsciousness. Heat exposure emergencies range from localized cramping to severe hyperthermia (heat stroke) with unresponsiveness and unconsciousness. The primary goal in the treatment of the patient at risk for hyperthermia is to cool the patient and restore body fluids.


The patient's health and predisposing factors may increase the likelihood of environmental illness and injury. Patients suffering from trauma, shock, hypoglycemia and stroke are at greater risk of developing hypothermia. Newborns, infants, drug & alcohol abuse patients and the elderly have increased predisposition to hypothermia. The primary goal in the treatment of the patient at risk for hypothermia is to insulate the patient and prevent further heat loss.

First Responder & BLS Care should be focused on assessing the situation and initiating routine patient care to assure that the patient has a patent airway, is breathing and has a perfusing pulse as well as beginning treatment for shock.

1. Render initial care in accordance with the *Universal Patient Care Protocol*.
2. Handle the patient as **gently** as possible.
3. **Cold exposure** create a warm environment for the patient. Remove wet or frozen clothing and cover the patient with warm blankets. Prevent re-exposure to cold. Warm packs may be utilized for the neck (posterior), armpits, groin, and along the thorax. Do not rub frostbitten or frozen body parts. Protect injured parts (e.g. blisters) with light, sterile dressings and avoid pressure to the area.
4. **Heat exposure** move the patient to a cool environment. Remove clothing as necessary to make the patient comfortable. Cold packs may be utilized for the neck (posterior), armpits, groin, and along the thorax. Do not cool the patient to a temperature that causes shivering. . Do not rub burned body parts. Protect injured parts (e.g. blisters) with light, sterile dressings and avoid pressure to the area.
5. **Oxygen: 15 L/min** via non-rebreather mask or 6 L/min via nasal cannula if the patient cannot tolerate a mask. Be prepared to support the patient's respirations with BVM if necessary.
6. Initiate transport and ALS intercept if needed.

ILS & ALS Care should be directed at continuing or establishing care, continuing EMR and BLS Care, conducting a thorough patient assessment, stabilizing the patient's perfusion and preparing for or providing patient transport.

1. **IV Fluid Therapy: 20mL/kg** fluid bolus of .9% Normal Saline.
2. Treat other symptoms per the appropriate protocol.
3. Initiate ALS intercept if needed and transport as soon as possible.

	Peoria Area EMS System Prehospital Care Manual	Trauma Protocols	Page
Effective Oct 1, 2021	Near Drowning Protocol		112

Near drowning results from submersion in water or other liquid for a period of time that does not result in irreversible death. The time interval of submersion that causes irreversible death is dependent on several factors such as: temperature of the water, the health of the victim and any trauma suffered during the event. All persons submerged 1 hour or less should be vigorously resuscitated in spite of apparent death. Initial care of the near drowning victim should begin in the water.

First Responder & BLS Care should be focused on assessing the situation and initiating routine patient care to assure that the patient has a patent airway, is breathing and has a perfusing pulse as well as beginning treatment for shock.


1. Render initial care in accordance with the *Universal Patient Care Protocol* and *Universal Trauma Care Protocol*.
2. Make sure the scene is safe. Use appropriate personnel and equipment for rescue.
3. Establish and maintain spinal immobilization.
4. **Oxygen: 15 L/min** via non-rebreather mask or 6 L/min via nasal cannula if the patient cannot tolerate a mask. Be prepared to clear the airway and support the patient's respirations with BVM if necessary.
5. Initiate **CPR** if indicated.
6. Treat respiratory and/or cardiac symptoms per the appropriate protocol.
7. Consider **Proventil (Albuterol): 2.5 mg** in 3mL of normal saline via nebulizer over 15 min. May repeat **Albuterol 2.5 mg** every 15 minutes as needed. (If wheezes still present)
8. Consider Pulse Oximetry and Capnography if available.
9. Initiate ALS intercept, transport, contact the receiving hospital as soon as possible.

ILS & ALS Care should be directed at continuing or establishing care, continuing EMR, BLS, & ILS Care, conducting a thorough patient assessment, stabilizing the patient's perfusion and preparing for or providing patient transport.

1. Consider CPAP if available for respiratory distress: If the systolic BP > 100mmHg.
 - a. If systolic B/P is between 90-100mmHg, contact Medical Control prior to initiating CPAP.
 - b. **Do not** initiate CPAP if the systolic B/P is less than 90mmHg.
2. Consider Pulse Oximetry or Capnography if available.
3. Consider 12 lead EKG.
4. Transport and contact the receiving hospital as soon as possible.

Critical Thinking Elements:

- Recommended exam: Trauma Survey, Head, Neck, Chest, Abdomen, Pelvis, Back Extremities, Skin, Neuro.
- **Have a high index of suspicion for possible spinal injuries. All Drowning/Near Drowning patients should be immobilized.**
- With Cold water no time limit (resuscitate all). These patients have an increased chance of survival.
- Some patients may develop delayed respiratory distress.
- All victims should be transported for evaluation due to potential for worsening over the next several hours.

	Peoria Area EMS System Prehospital Care Manual	Trauma Protocols	Page
Effective August 7, 2024	TXA-Tranexamic Acid Protocol		113

Tranexamic Acid (TXA) is a synthetic amino acid (lysine) that blocks plasminogen from being converted to the enzyme plasmin. Plasmin works to break down already-formed blood clots in the human body by attacking and breaking down fibrin destroying clots in a process known as fibrinolysis. TXA is now being used to treat severely injured trauma patients who have or are at risk for severe hemorrhage.

Indications:

Any trauma patient ≥ 14 years of age, at high risk for ongoing internal hemorrhage and meeting one or more of the following criteria:

- Systolic BP < 90 mmHg or Patients ≥ 65 years of age with systolic BP < 110 mmHg.
- Tachycardia > 120 beats per minute with signs of hypoperfusion (confusion, altered mental status, cool extremities, etc.)
- Expanded indications for TXA usage include acute uncontrolled epistaxis, acute Post Partum hemorrhage, and acute severe menstrual bleeding with signs of hypo perfusion as listed above.


Contraindications:

- Injuries > 3 hours old.
- Evidence of Disseminated Intravascular Coagulation (DIC)
- Patients < 14 years of age.
- Hypersensitivity to the drug.

1. **How Supplied:** 10mL vial containing 1000mg
2. **Preparation:** Mix 1000mg of TXA in 250 mL of 0.9% Normal Saline.
3. **Administration:** Infuse over 10 minutes
 - 10 gtts/mL tubing at a drip rate of 4 gtts/second. Or Infusion pump (if available) at 1500mL/hr.
4. Notify receiving hospital of TXA administration.
5. Clearly document mechanism of injury, time injury/incident occurred, indications for use and time TXA was administered.

Critical Thinking Elements

- **TXA should never be administered at a “wide open” rate**
- **Female patients taking or using any form of birth control containing estrogen and progestin are at increased risk for blood clots and this medication significantly increases that risk.**
- Hypotension has been observed when TXA is administered too rapidly.

	Peoria Area EMS System Prehospital Care Manual	Trauma Protocols	Page
Effective Oct 1, 2021	Head and Spinal Trauma Protocol		114

Injuries to the head: may cause underlying brain tissue damage. Increased intracranial pressure from bleeding or swelling tissue is a common threat after head trauma.

Common signs and symptoms of increased intracranial pressure include:

- Confusion
- ALOC
- Dilated or unequal pupils
- Markedly increased systolic blood pressure
- Decreased pulse (bradycardia)
- Abnormal respiratory patterns

Priorities for the treatment of head injury patients include airway management, maintenance of adequate oxygenation & blood pressure as well as appropriate C-spine control & immobilization.

First Responder & BLS Care

First Responder & BLS Care should be focused on assessing the situation and initiating routine patient care to assure that the patient has a patent airway, is breathing and has a perfusing pulse as well as beginning treatment for shock.

1. Render initial care in accordance with the *Universal Patient Care Protocol*.
2. Be prepared for vomiting and have suction readily available.
3. **Oxygen:** 15 L/min via non-rebreather mask or 6 L/min via nasal cannula if the patient cannot tolerate a mask. Be prepared to support the patient's respirations with BVM if necessary.
4. Control bleeding using direct pressure, pressure dressings and pressure points.
5. If patient has an alerted mental status, perform **blood glucose level test**.
6. **Oral Glucose: 15g PO** if the patient's blood sugar is <60mg/dL, the patient is alert to verbal stimuli, is able to sit in an upright position, has good airway control and has an intact gag reflex.
7. **BLS only: Glucagon: 1mg IM or 2mg IN** (1mg per nostril) if blood sugar is less than 60mg/dL, the patient is unresponsive and/or has questionable airway control or absent gag reflex.
8. Initiate ALS intercept and transport as soon as possible.
9. **Contact Medical Control** as soon as possible.

ILS & ALS Care

ILS & ALS Care should be directed at continuing or establishing care, continuing EMR, and BLS Care, conducting a thorough patient assessment, stabilizing the patient's perfusion and preparing for or providing patient transport.

1. **IV Fluid Therapy:** 20mL/kg fluid bolus if needed to obtain a systolic BP of 100mmHg.

If signs of increased ICP are not present and the patient has an altered mental status:

2. Perform **blood glucose level test**.
3. **Oral Glucose: 15g PO** if the patient's blood sugar is < 60mg/dL, the patient is alert to verbal stimuli, is able to sit in an upright position, has good airway control and has an intact gag reflex.
Dextrose 50%: 25g IV if blood sugar is < 60mg/dL.
Glucagon: 1mg IM or (if available) 2mg IN if blood sugar is less than 60mg/dL, the patient is unresponsive and/or has questionable airway control or absent gag reflex.

8. **Narcan: 2mg IV/IM** if no response to Dextrose or Glucagon within 2 minutes and narcotic overdose is suspected. May repeat 2mg IV or IM if no response in **5 minutes (with Medical Control order)**.
Narcan: 2mg IN if unable to obtain IV access.
4. Initiate ALS intercept if needed and transport as soon as possible.
5. **Contact Medical Control** as soon as possible.

Critical Thinking Elements

- Head trauma patients should receive oxygen to keep SpO₂ > 95%, preferably via NRM. Patients with poor respiratory effort may require ventilation with a BVM at 8-10 breaths/min.
- *Cushing's response* refers to the ominous combination of markedly increased arterial blood pressure and resultant bradycardia indicating cerebral herniation.
- Avoid prophylactic hyperventilation of a head trauma patient as this can cause cerebral vasoconstriction. However, if s/s of increased ICP are present, then controlled hyperventilation may be needed (with Medical Control order) until s/s of increased ICP have subsided:
 - 20 breaths/min for adults
 - 25 breaths/min for children
 - 30 breaths/min for infants
- Deeply comatose patients may require advanced airway placement (GCS < 8). Refer to the *BLS Airway Procedure*.
- Treat for hemorrhagic shock if the patient's systolic BP is < 110mmHg. Hypotension decreases cerebral perfusion and worsens brain injury and must be corrected.

Injuries to the spine: commonly result from mechanism of injury involving high kinetic energy. Any neurovascular impairment or spinal deformities are indicative of possible spinal trauma.

Mechanisms of injury suggesting possible spinal injury include:

- Falls
- Motor vehicle crashes (MVCs)
- Gunshot wounds to the head, neck or back
- Forceful blows to the head and neck

First Responder & BLS Care

First Responder & BLS Care should be focused on assessing the situation and initiating routine patient care to assure that the patient has a patent airway, is breathing and has a perfusing pulse as well as beginning treatment for shock. BLS should initiate transport asap.

1. Render initial care in accordance with the *Universal Patient Care Protocol*.
2. **Oxygen:** 15 L/min via non-rebreather mask or 6 L/min via nasal cannula if the patient cannot tolerate a mask. Be prepared to support the patient's respirations with BVM if necessary.
3. Frequently reassess the patient's airway & ventilatory status.
4. Assess and record any pain on palpation of the spine, any motor/sensory deficits of the extremities, abnormal arm position, ptosis and/or priapism.
5. Assess skin for temperature which will initially be warm, flushed and dry (below the point of injury). Cover the patient and keep him/her warm.
6. Assess for neurogenic shock: decreased BP, decreased pulse, & decreased respiratory rate.
7. Fully immobilize the patient and protect paralyzed limbs by securing the patient to the backboard.
8. Repeat vital signs, GCS & RTS every **5 minutes**.

- 9. Initiate ALS intercept and transport as soon as possible.
- 10. **Contact Medical Control** as soon as possible.

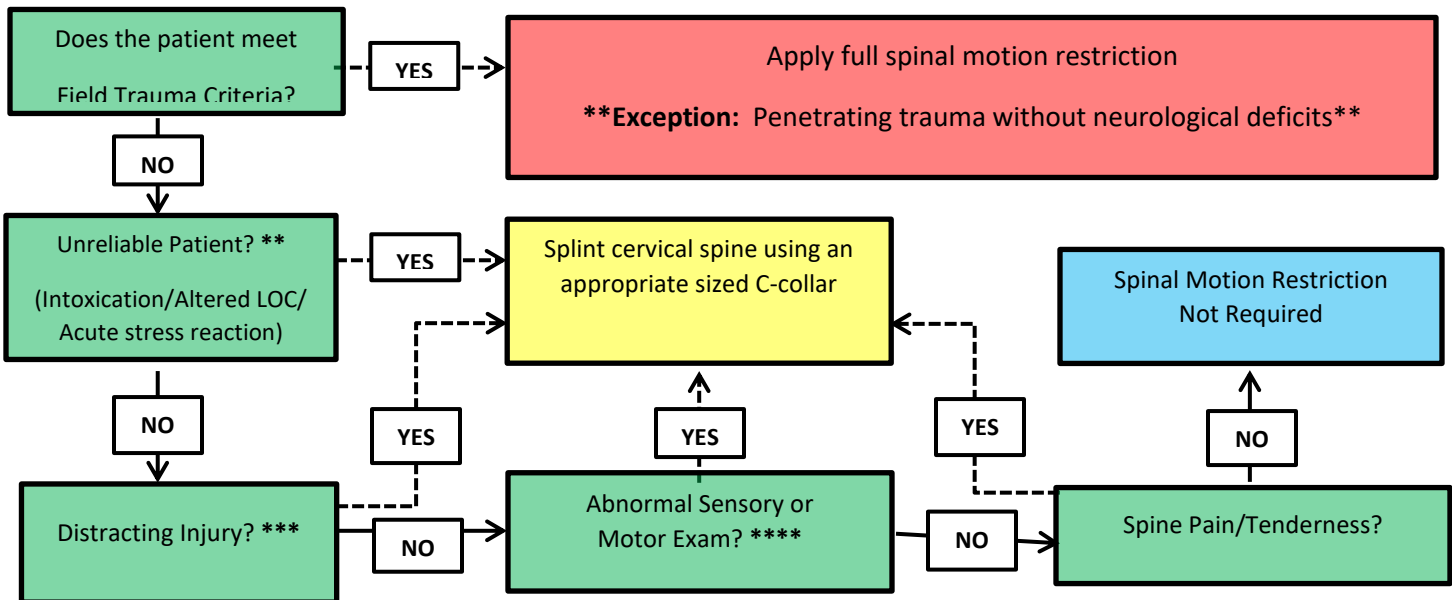
ILS & ALS Care


ILS & ALS Care should be directed at continuing or establishing care, continuing EMR and BLS Care, conducting a thorough patient assessment, stabilizing the patient’s perfusion and preparing for or providing patient transport.

- 1. **IV Fluid Therapy: 20mL/kg** fluid bolus if needed to obtain a systolic BP of at least 100mmHg.
- 2. Initiate ALS intercept if needed and transport as soon as possible.
- 3. **Contact Medical Control** as soon as possible.
- 4. **ALS only: Norepinephrine** infusion (this medication is system optional for prolonged scene times or transports): 1-20 mcg/min. Start at 5 mcg/min, titrate every 5-10 min to maintain SBP > 90.
- 5. Administer through a confirmed patent, large bore (>18 gauge) IV in a proximal vein. (Antecubital preferred), as this medication may cause limb necrosis if extravasation occurs.
- 6. If extravasation occurs, notify stop medication, and notify receiving facility immediately.
- 7. Monitor blood pressure every 5 minutes
- 8. **ALS only: Push-dose epinephrine (10 mcg/mL)** (for short transports)
- 9. Transport as soon as possible.
- 10. **Contact Medical Control** as soon as possible.

If a C-collar is applied, the patient needs to remain supine. If patient comfort is a factor, the head can be elevated to a maximum of 30 degrees.

Clinical indications: patients with traumatic neck/back pain, head injury or facial trauma, or with a significant or uncertain MOI or high index of suspicion for spinal trauma (e.g. axial load (diving), MVC or bicycle, falls...). In high-risk patients (e.g. elderly, osteoporotic, degenerative disorders) less forceful mechanisms can cause significant injuries.



	Peoria Area EMS System Prehospital Care Manual	Trauma Protocols	Page
Effective Oct 1, 2021	Extremity Trauma Protocol		117

Attention should be given to extremity injuries to limit further damage and discomfort for the patient. However, extremity care should never interfere with lifesaving decisions or interventions and should not delay transport of trauma patients.

Signs of extremity injury include:

- Pain
- Deformity
- Contusion
- Tenderness
- Swelling
- Instability
- Crepitus
- Absence of distal pulses

EMR Care, BLS Care, ILS Care, ALS Care

Care should be focused on assessing the situation and initiating care to assure the patient is maintaining an airway, is breathing, and has a perfusing pulse and beginning treatment for shock.

1. Render initial care in accordance with the *Universal Patient Care Protocol*.
2. **Oxygen:** 15 L/min via non-rebreather mask or 6 L/min via nasal cannula if the patient cannot tolerate a mask. Be prepared to support the patient's respirations with BVM if necessary.
3. Control any external bleeding:
 - a) Apply direct pressure and pressure dressing.
 - b) Elevate the extremity if possible.
 - c) Use pressure points.
 - d) Assess distal pulse, motor & sensation.
4. Splint musculoskeletal injuries:
 - a) Immobilize the joints with a rigid splint above and below the injury for long bone injuries.
 - b) Immobilize the long bones with a rigid splint above and below the injured site for joint injuries.
 - c) Assure the joints and bones are immobilized sufficiently to stabilize the injured structures (especially when using a soft splint or pillow).
 - d) Assess distal pulse, motor & sensation.
5. If the extremity is angulated and no distal pulse is present, reduce by gently applying manual traction until the pulse returns.
 - a) Reassess distal pulse, motor and sensation.
6. Amputation cases:
 - a) Control external bleeding.
 - b) Dress, bandage and/or splint the injured extremity.
 - c) Attempt to recover the severed part:
 - Wrap in sterile gauze, towel or sheet.
 - Wet dressing with sterile water or .9% Normal Saline.
 - Place severed part in waterproof bag or container and seal.
 - Place the bag/container in another container filled with ice or cold water.
 - DO NOT immerse the amputated part in any solutions.

- DO NOT allow the tissue to freeze.
 - Transport the container with the patient.
7. Initiate ALS intercept if needed and transport as soon as possible.
 8. **BLS, ILS, ALS only: Ondansetron (Zofran):** 4mg PO orally disintegrating tablet for nausea and vomiting
 9. Contact the receiving hospital as soon as possible or Medical Control if necessary.

ILS & ALS Care

1. **IV Fluid Therapy:** 20mL/kg fluid bolus if the patient is hypotensive to obtain a systolic BP of at least 100mmHg.
2. **Ondansetron (Zofran):** 4mg IV over 2 minutes for nausea and/or vomiting.
 - a. **Ondansetron (Zofran):** 4mg IM
 - b. **Ondansetron (Zofran):** 4mg PO orally disintegrating tablet
3. Manage the patient’s pain.
4. Contact the receiving hospital as soon as possible or Medical Control if necessary.

Fentanyl	50 mcg IV, over <u>2 minutes</u> for pain. Fentanyl 50 mcg IV may be repeated every 5 minutes to a total of 200 mcg.
	If unable to establish IV access , may administer Fentanyl 50 mcg IM or IN. May be repeated as needed to a total of 200 mcg. (See dosing sheets for IN)

4. Contact the receiving hospital as soon as possible or Medical Control if necessary.


If the patient is **hemodynamically unstable** due to traumatic injury the provider should manage the patient’s pain by using the following medication.

Ketamine IV/IO	0.3mg/kg slow IV/IO Push every 20 minutes to a maximum 3 doses
Ketamine IM	0.5mg/kg slow IM Push

The most common adverse effects of Ketamine are hallucinations, anxiety, dysphoria and euphoria.

Critical Thinking Elements

- **In patients with known renal failure, the Fentanyl dose must be reduced to 25mcg. The dose may be repeated one time to a maximum dose of 50mcg.**
- Avoid use of Zofran in patients with congenital long QT syndrome as these patients are at particular risk for Torsades de Pointes

	Peoria Area EMS System Prehospital Care Manual	Trauma Protocol	Page
Effective Oct 1, 2021	Drug Overdose/ Poisoning Protocol		119

Poisoning may occur by ingesting, injecting, inhaling or absorbing a harmful substance or a substance in harmful quantities. Due to the magnitude and multiplicity of agents that are toxic or could be used as toxins, this protocol focuses on a general approach to the patient who has taken an overdose or has been exposed to a toxic agent. The substance container may have vital information for resuscitation of a poisoned patient.

First Responder & BLS Care should be focused on assessing the situation and initiating routine patient care to assure that the patient has a patent airway, is breathing and has a perfusing pulse as well as beginning treatment for shock.


1. Consider possible scene & patient contamination and follow agency safety procedures.
2. Render initial care in accordance with the *Universal Patient Care Protocol*
3. **Oxygen: 15 L/min** via non-rebreather mask or 6 L/min via nasal cannula if the patient cannot tolerate a mask. Be prepared to support the patient's respirations with BVM if necessary.
4. **Narcan: 2mg IN** (1mg per nostril) if suspected narcotic overdose with respiratory depression (≤ 8 breaths per minute)

ILS & ALS Care should be directed at continuing or establishing care, continuing EMR and BLS Care, conducting a thorough patient assessment, stabilizing the patient's perfusion and preparing for or providing patient transport.

1. **Narcan: 2mg IV/IM** if no response to Dextrose or Glucagon within 2 minutes and narcotic overdose is suspected. May repeat 2mg IV or IM if no response in **5 minutes (with Medical Control order)**. **Narcan: 2mg IN** if unable to obtain IV access.
2. **ALS Only: Sodium Bicarbonate: 50meq IV/IO** if known tricyclic antidepressant (TCA) or known Aspirin (ASA) overdose.
3. **IV Fluid Therapy: 20mL/kg** fluid bolus if the patient is hypotensive to achieve a systolic BP of at least 100mmHg.
4. Transport as soon as possible and contact the receiving hospital as soon as possible.

Critical Thinking Elements

- Overdose patients should not be allowed to refuse treatment and transport.
- **DO NOT** give a suspected poisoning patient anything by mouth.
- Caustic substances are those which have strong acid or alkali properties and usually cause intra-oral burns, painful swallowing or burning/painful regurgitation.
 - **Common Acids:** Hydrochloric Acid (swimming pool and toilet bowl cleaners), Sulfuric Acid (battery acid), Acetic Acid and Phenol.
 - **Common Bases (Alkali):** Lye (washing powders and paint removers), drain pipe cleaners (Drano), disk batteries, bleach, ammonia, polishes, dyes and jewelry cleaners.
- Patients who overdose on TCAs may initially appear well but may rapidly deteriorate. Monitor closely for ALOC and cardiovascular instability. Tachycardia and a widened QRS complex are generally signs of a life-threatening ingestion.
 - **Common TCAs:** Amitriptyline, Elavil, Doxepin, Imipramine, Clomipramine, etc.
- Narcotic and benzodiazepine overdoses do not generally cause abrupt changes in consciousness except when combined with alcohol use.
 - **Common Benzodiazepines:** Valium, Diazepam, Ativan, Lorazepam, Xanax, etc.

	Peoria Area EMS System Prehospital Care Manual	Trauma Protocol	Page
Effective Oct 1, 2021	Excited Delirium Protocol		120

Excited delirium is a condition in which a person is in a psychotic state and extremely agitated. Mentally the subject is unable to focus and process any rational thought or direct his/her attention to any one thing. Physically, the organs with the subject are functioning at such an excited rate that they begin to shut down. These two factors occurring at the same time cause a person to act erratically enough that they become a danger to themselves and to the public.

Common Signs	Possible Causes
Aggressive, bizarre behavior	Overdose
Nakedness	(stimulant or hallucinogenic drugs)
Hyperthermia	Hypoglycemia
Dilated pupils	Drug withdrawal
Incoherent speech	Head Trauma
Fear and panic	Illness
Profuse Sweating	Psychosis
Shivering	Other Metabolic Conditions
Inconsistent breathing patterns	Psychiatric patient on/off medications
High pain tolerance	
Excessive Strength	
Restlessness	

First Responder & BLS Care should be focused on assessing the situation and initiating routine patient care to assure that the patient has a patent airway, is breathing and has a perfusing pulse as well as beginning treatment for shock.

1. Ensure Scene Safety – Responder safety is the top priority.
2. Render initial care in accordance with the **Universal Patient Care Protocol**.
3. **Oxygen:** Administer utilizing the **Oxygen Therapy Procedure**.
4. Obtain blood glucose level, if < 60mg/dL, treat hypoglycemia according to the Altered Level of Consciousness Protocol.
5. Maintain control of the scene and request law enforcement if needed.
6. Demonstrate Professionalism and Courtesy
7. **BLS Only:** If restraints are needed, apply them in accordance with the Behavioral Emergencies/Chemical Restraints Protocol.
8. If patient exhibits signs of excited delirium (above) call for an intercept with higher level of care.

ILS Care should be directed at continuing or establishing care, continuing EMR and BLS Care, conducting a thorough patient assessment, stabilizing perfusion and preparing for or providing transport.

1. If patient exhibits signs of excited delirium, provide sedation using **Midazolam (Versed): 5mg IM** or via the Mucosal Atomizing Device®. This can be repeated once to a maximum dose of 10mg. Larger doses may be required – this is by **Medical Control order only**.
2. If the patient is hyperthermic, actively cool by placing cold packs to the posterior neck, armpits, groin and along the thorax.

ALS Care should be directed at continuing or establishing care, continuing EMR, BLS, & ILS Care, conducting a thorough patient assessment, ensuring personal safety and preparing for or providing patient transport.

1. If patient exhibits signs of excited delirium, provide sedation using;
2. **Ketamine 4mg/kg IM**
3. If the patient is hyperthermic;
 - Mix **Sodium Bicarbonate 50mEq with 1L of Normal Saline** and infuse at a wide open rate. **And**
 - Actively cool the patient by placing cold packs to the posterior neck, armpits, groin, and along the thorax.


Critical Thinking Elements

- High body temperature is a key finding in predicting a high risk of sudden death. Another key symptom to the onset of death while experiencing excited delirium is “instant tranquility”. This is when the person has been very violent and vocal then suddenly becomes quiet and docile.
- It is paramount that patients exhibiting symptoms of this syndrome be effectively and quickly physically restrained, and then calmed using sedation and verbal coaching. *The likelihood of sudden apnea and death increases the longer these patients are allowed to struggle against restraint.* Managing these patients therefore requires a coordinated effort among all responders and Law Enforcement personnel.
- Haldol is for use in a mild to moderate behavioral emergency psychotic event.
- Ketamine may precipitate psychosis in a patient with a history of schizophrenia
- When using Ketamine, be aware of Side Effects
 - Laryngospasm:** this very rare adverse reaction presents with stridor and respiratory distress.

After every administration of ketamine:

- a. Prepare to provide respiratory support including bag-valve-mask ventilation and suction which are generally sufficient in rare cases of laryngospasm.
- b. Institute cardiac monitoring, pulse oximetry and continuous waveform capnography
- c. Establish IV or IO access, check blood glucose
- d. Establish and maintain physical restraint.

Emergence reaction: presents as anxiety, agitation, apparent hallucinations or nightmares as ketamine is wearing off. For severe reactions, consider Versed 2mg IM or IV.

	Peoria Area EMS System Prehospital Care Manual	Trauma Protocol	Page
Effective Oct 1, 2021	Less than Lethal Weapons Protocol		122

All levels of providers in the System should do the following when encountering these patients:

1. Ensure that the scene has been secured by law enforcement personnel and that the scene is safe to enter.
2. Ensure no cross contamination occurs to providers or equipment.
3. Ensure that the patient is subdued and is no longer a threat to EMS personnel.

Teargas / Oleoresin Capsicum (Pepper Spray) Exposure

First Responder and BLS Care should be focused on assessing the situation and initiating routine patient care to assure that the patient has a patent airway, is breathing and has a perfusing pulse as well as beginning treatment for shock.

1. Render initial care in accordance with the *Universal Patient Care Protocol*.
2. **Oxygen**: For agitation, shortness of breath or chest pain: 15 L/min via non-rebreather mask or 6 L/min via nasal cannula if the patient cannot tolerate a mask.
3. **Flush eyes (if affected) with sterile water** to get rid of gross contamination and to aid in recovery.
4. **Proventil (Albuterol): 2.5mg** in 3mL of normal saline via nebulizer over 15 minutes ***if the patient is short of breath and wheezing***. May repeat **Albuterol 2.5mg** every **15 minutes** as needed (**with Medical Control order**).
5. Assess for secondary trauma that may be present and treat appropriately per trauma protocols.
6. Assess for any secondary causes of patient behavior which lead to law enforcement subduing the patient. These secondary causes include:
 - a. Alcohol intoxication
 - b. Drug abuse
 - c. Hypoglycemia or other medical disorder
 - d. Psychotic disorder
7. **Contact Medical Control** if restraints are needed. An order for restraint is a **MUST**.
8. If the patient has an altered mental status, then the patient must be assumed incompetent to refuse care. **Contact Medical Control** for ALL refusal issues.
9. Initiate ALS intercept if needed and transport as soon as possible.
10. Contact receiving hospital as soon as possible or Medical Control if necessary.

ILS & ALS Care should be directed at continuing or establishing care, continuing EMR and BLS Care, conducting a thorough patient assessment, stabilizing perfusion and preparing for or providing transport.

1. Render initial care in accordance with the *Universal Patient Care Protocol*.
2. **Contact Medical Control** if restraints are needed. An order for restraint is a **MUST**.
3. **IV Fluid Therapy: 20mL/kg** fluid bolus if the patient is cooperative and if the vital signs reflect tachycardia or hypotension to achieve a systolic BP of at least 100mmHg.
4. Initiate cardiac monitoring per *Routine Care* or if the patient appears agitated.
5. If the patient has an altered mental status, then the patient must be assumed incompetent to refuse care. **Contact Medical Control** for ALL refusal issues.
6. Initiate ALS intercept if needed and transport as soon as possible.
7. Contact receiving hospital as soon as possible or Medical Control if necessary.

Taser-Related Injuries


A taser is an electrical device that is capable of shooting out two small barbed probes that are designed to pierce a subject's skin for the purpose of delivering a subduing pulse of electricity that causes the subject to lose voluntary muscular control. Anecdotal and theoretical consequences of taser use include *cardiac arrhythmias* and *seizures* (especially if the subject is under the influence of alcohol and/or illegal drugs).

First Responder & BLS Care should be focused on assessing the situation and initiating routine patient care to assure that the patient has a patent airway, is breathing and has a perfusing pulse as well as beginning treatment for shock.

1. Render initial care in accordance with the *Universal Patient Care Protocol*.
2. **Oxygen:** For agitation, shortness of breath or chest pain: 15 L/min via non-rebreather mask or 6 L/min via nasal cannula if the patient does not tolerate a mask.
3. Ask law enforcement to remove taser probes. **EMS personnel are not to remove the probes unless** specifically trained and are comfortable doing so.
4. If the probes are in a sensitive area such as the **face, eye, neck, genitalia** or a **female's breast**, leave the probes in place and bandage.
5. Assess for any secondary causes of patient behavior which lead to law enforcement subduing the patient. These secondary causes include:
 - a. Alcohol intoxication
 - b. Drug abuse
 - c. Hypoglycemia or other medical disorder
 - d. Psychotic disorder
6. **Contact Medical Control** if restraints are needed. An order for restraint is a MUST.
7. If the patient has an altered mental status, then the patient must be assumed incompetent to refuse care. **Contact Medical Control** for ALL refusal issues.
8. Initiate ALS intercept if needed and transport as soon as possible.
9. Contact receiving hospital as soon as possible or Medical Control if necessary.

ILS & ALS Care should be directed at continuing or establishing care, continuing EMR and BLS Care, conducting a thorough patient assessment, stabilizing perfusion and preparing for or providing transport.

1. Initiate cardiac monitoring.
2. **IV Fluid Therapy:** 20mL/kg fluid bolus if the patient is cooperative and if the vital signs reflect tachycardia or hypotension to achieve a systolic BP of at least 100mmHg
3. **Midazolam (Versed): 2mg IV** over 1 minute for seizure activity. May repeat Midazolam (Versed) 2mg IV every 5 minutes as needed to a total of 10mg.
Midazolam (Versed): 5mg IM if the patient is seizing and attempts at IV access have been unsuccessful. May repeat dose one time in 15 minutes if needed. **Midazolam (Versed):** Intranasal if unable to obtain IV access. ([See Intranasal Dosing Chart Pg. 47](#)).
4. If the patient has an altered mental status, then the patient must be assumed incompetent to refuse care. **Contact Medical Control** for ALL refusal issues.
5. Initiate ALS intercept if needed and transport as soon as possible.
6. Contact receiving hospital as soon as possible or Medical Control if necessary.

	Peoria Area EMS System Prehospital Care Manual	Trauma Protocol	Page
Effective Oct 1, 2021	OB/ Childbirth Protocol		124

Childbirth is a natural process. EMS providers called to a woman in labor should determine whether there is enough time to transport the expected mother to the hospital or if deliver is imminent. If childbirth appears imminent, immediately prepare to assist with the delivery.

EMR Care, BLS Care, ILS Care, ALS Care

First Responder, BLS, ILS & ALS Care should be focused on assessing the situation, initiating routine patient care and preparing for or providing patient transport. Special attention should be given to the privacy of the mother and concerns of immediate family members should be addressed.

1. Render initial care in accordance with the *Universal Patient Care Protocol*.
2. **Oxygen:** 15 L/min via non-rebreather mask or 6 L/min via nasal cannula if the patient cannot tolerate a mask.
3. Obtain a history on the patient including:
 - Gravida (# of pregnancies)
 - PARA (# of live births)
 - Expected delivery date
 - Length of previous labor
 - Complications of previous pregnancies
 - Onset of contractions
 - Prenatal care (if any)
4. Allow the expectant mother to remain in a position that is most comfortable.
5. If delivery is not imminent, transport the patient on her left side.
6. Determine if there is adequate time to transport:
 - a) Assess the nature, extent and time of contractions.
 - b) Assess the patient for high-risk factors.
 - c) Assess the status of the membranes and any discharge.
 - d) Assess for pushing with contractions.
 - e) Take into consideration the length of previous labor.
7. If delivery is imminent:
 - a) DO NOT ATTEMPT TO RESTRAIN OR DELAY DELIVERY
 - b) Position the mother supine on a flat surface if possible.
 - c) Use full PPE – gloves, gown & goggles.
8. **(ILS & ALS) IV Fluid Therapy:** 20mL/kg fluid bolus if the patient is hypotensive to obtain a systolic BP of at least 100mmHg.
9. Prepare for delivery:
 - a) Control delivery of the head so that it does not emerge too quickly. Support the infant's head as it emerges and protect the perineum with gentle hand pressure.
 - b) Puncture the amniotic membrane with gentle finger pressure if it is still intact and visible outside the vagina.
 - c) Assess for nuchal cord and, if present, gently remove the cord from around the newborn's neck.
 - d) Suction the mouth, then nose of the newborn with a bulb syringe as soon as the head is delivered.
 - e) As the shoulders emerge, guide the head & neck downward to deliver the anterior shoulder. Support and lift the head & neck slightly to deliver the posterior shoulder.
 - f) Ensure a firm hold on the baby as the rest of the newborn's body delivers.
 - g) Keep the newborn level with the mother's vagina until the cord stops pulsating and is double clamped.

Infant Post-Partum Care

1. Begin the *Emergency Childbirth Record*.
2. Continue to suction the nose and mouth. Spontaneous respirations should begin within *15 seconds*.
 - If spontaneous respirations are not present, begin artificial ventilations with BVM & 100% O₂ at 30-40 vpm.
 - If no brachial pulse is present **OR** the pulse is less than 100 bpm, begin CPR.
3. Dry the newborn and wrap in a warm blanket, keeping the baby at the level of the mother's vagina until the cord is clamped and cut.
4. After the umbilical cord stops pulsating, clamp the cord at 3" & at 4" from the newborn's abdomen and cut between the clamps with the sterile scalpel found in the OB kit.
5. Assess the cord for bleeding and note the number of vessels present.
6. Obtain an APGAR score at **1 minute** and again at **5 minutes** after delivery.
7. Place ID tags on the mother and infant with the following information:
 - Name of the mother
 - Sex of the infant
 - Date and time of delivery
8. **DO NOT** separate the mother and infant unless both have ID tags.

Post-Partum Care for the Mother

1. The placenta should deliver within 5-20 minutes. Collect the placenta in a plastic bag and bring it to the hospital with the mother. **DO NOT** pull on the cord to facilitate delivery of the placenta.
2. Do not delay transport for delivery of the placenta.
3. If the perineum is torn and bleeding, apply direct pressure with a 5x9 dressing or trauma dressing and have the patient bring her legs together.
4. Massage the uterus until firm.
To massage the uterus, place one hand with fingers fully extended just above the mother's pubic bone and use the other hand to press down into the abdomen and gently massage the uterus approximately 3 to 5 minutes until it becomes firm.
5. For uncontrolled hemorrhage consider **TXA: Mix 1000mg of TXA in 250 mL of 0.9% Normal Saline.** Infuse over 10 minutes.

Documentation Requirements

1. Completed *Emergency Childbirth Record*. Document the date, time and place of delivery
2. Presence or absence of a nuchal cord--*If nuchal cord is present, document how many times the cord was wrapped around the baby's neck.*
3. Appearance of the amniotic fluid. Time the placenta was delivered and its condition
4. APGAR score at **1 minute** and **5 minutes**. Any resuscitation / treatment rendered and newborn response to treatment.

Critical Thinking Elements

- Lower than normal blood pressure and higher than usual heart rate are normal vital sign changes with pregnancy.
- The desire to push during contractions is an indicator that delivery is imminent.
- Be respectful of the expected mother's privacy.
- Assess the patient for peripheral edema. This may indicate Pre-eclampsia / Eclampsia. Monitor patient closely and watch for seizure activity.
- Tag the mother and baby with the same information by wrapping tape around their wrists.
- Green or brown amniotic fluid indicates the presence of Meconium (fetal stool) and should be reported immediately to the receiving facility staff.

Obstetrical complications: can rapidly lead to hypovolemic shock and threaten the life of the mother and child. Care should be focused on assessing the situation, initiating routine patient care and beginning treatment for shock. Monitor vitals closely.

First Responder Care, BLS Care, ILS Care, ALS Care

1. Render initial care in accordance with the *Universal Patient Care Protocol*.
2. **Oxygen:** 15 L/min via non-rebreather mask or 6 L/min via nasal cannula if the patient cannot tolerate a mask. Be prepared to support the patient's respirations with BVM if necessary.
3. Frequently reassess the patient's airway & ventilatory status.

Placenta Previa & Abruptio Placenta

Placenta previa occurs as a result of abnormal implantation of the placenta on the lower half of the uterine wall. Bleeding occurs when the lower uterus begins to contract and dilate in preparation for labor and pulls the placenta away from the uterine wall. The hallmark of *placenta previa* is the onset of painless bright red vaginal bleeding, usually in the 3rd trimester of pregnancy.

Abruptio placentae is the premature separation of a normally implanted placenta from the uterine wall. Signs and symptoms can vary depending on the extent and character of the abruption.

Central Abruptio (partial abruption): Characterized by a sudden sharp, tearing pain and development of a stiff, board like abdomen but no vaginal bleeding (blood is trapped between the placenta and the uterine wall).

Complete Abruptio Placentae: Characterized by massive vaginal bleeding and profound maternal hypotension.

1. Note the amount of bleeding.
2. Place the patient on her left side.
3. Load and transport as soon as possible.
4. **(ILS & ALS) IV Fluid Therapy:** 20mL/kg fluid bolus if the patient is hypotensive to obtain a systolic BP of at least 100mmHg.
5. **Contact Medical Control** as soon as possible.

Pre-Eclampsia and Eclampsia

Pre-eclampsia is defined as an increase in systolic blood pressure by 30mmHg and/or a diastolic increase of 15mmHg over baseline on at least two occasions at least 6 hours apart. *Pre-eclampsia* is most commonly seen in the last 10 weeks of gestation and is thought to be caused by abnormal vasospasm.

Pre-Eclampsia: Characterized by hypertension and edema to the hands and face (and protein in the urine).

Severe Pre-Eclampsia: Characterized by marked hypertension (160/100 or higher), generalized edema, headache, visual disturbances, pulmonary edema and a dramatic decrease in urine output (along with a significant increase of protein in the urine).

Eclampsia: Characterized by generalized tonic-clonic seizure activity often preceded by flashing lights or spots before the eyes. The development of right upper quadrant pain or epigastric pain can also indicate impending seizure.

Note: The risk of fetal mortality increases by 10% with each maternal seizure.

1. Assure minimal CNS stimulation to prevent seizures (*i.e.* do not check papillary light reflex).
2. Place the patient on her left side.
3. Load and transport as soon as possible.
4. **(BLS)** Initiate ALS intercept.
5. **(ILS & ALS) IV Fluid Therapy:** TKO.
6. **(ILS & ALS) Midazolam (Versed):** 2mg IV over 1 minute for seizure activity. May repeat Midazolam (Versed) 2mg IV every 5 *minutes* as needed to a total of 10mg.
 - **Midazolam (Versed):** Versed Intranasal may also be used if unable to give IV Versed. (See [intranasal dosing sheet](#)).

7. **(ALS only) Magnesium Sulfate***: Rapid infusion of 4 gm (mixed 50 ml D5W and administer using macro drip, 2 gtts/sec). May repeat once, 2 gm (mixed 50 ml D5W and administer using macro drip, 2 gtts/sec).
8. **Contact Medical Control** as soon as possible.

Ectopic Pregnancy

Ectopic Pregnancy refers to the abnormal implantation of the fertilized egg outside of the uterus, usually in the fallopian tube. It can be a life-threatening condition and accounts for approximately 10% of maternal mortality. Ectopic pregnancy presents as abdominal pain which starts out as diffuse tenderness and then localizes as a sharp pain in the lower abdomen on the effected side. Assume that any female of childbearing age with lower abdominal pain is experiencing an ectopic pregnancy.

1. Place the patient on her left side.
2. Load and transport as soon as possible.
3. **(BLS)** Initiate ALS intercept.
4. **(ILS & ALS) IV Fluid Therapy**: 20mL/kg fluid bolus if the patient is hypotensive to obtain a systolic BP of at least 100mmHg

Breech Presentation

A *breech* presentation is the term used to describe a situation in which either the buttocks or both feet present first.

1. Render initial care in accordance with the *Universal Patient Care Protocol*.
2. **Oxygen**: 15 L/min via non-rebreather mask or 6 L/min via nasal cannula if the patient does not tolerate a mask. Be prepared to support the patient's respirations with BVM if necessary.
3. Load and transport as soon as possible.
4. **(BLS)** Initiate ALS intercept.
5. Never attempt to pull the baby from the vagina by the trunk or legs.
6. As soon as the legs are delivered, support the baby's body (wrapped in a towel).
7. After the shoulders are delivered, gently elevate the trunk and legs to aid in the delivery of the head.
8. The head should deliver in 30 seconds. If it does not – reach 2 fingers into the vagina to locate the infant's mouth. Press the vaginal wall away from the baby's mouth to provide unrestricted respirations.
9. **Contact Medical Control** as soon as possible.

Prolapsed Cord


Limb Presentation

A *prolapsed cord* occurs when the umbilical cord precedes the fetal presenting part. This causes the cord to be compressed between the fetus and the pelvis and blocks fetal circulation. Fetal death will occur quickly without prompt intervention. Although relatively uncommon, the baby may be lying transverse across the uterus. In these cases, an arm or leg is the presenting part protruding from the vagina and will require delivery by cesarean section. Under no circumstances should you attempt a field delivery with a limb presentation.

1. Render initial care in accordance with the *Universal Patient Care Protocol*.
2. **Oxygen**: 15 L/min via non-rebreather mask or 6 L/min via nasal cannula if the patient does not tolerate a mask. Be prepared to support the patient's respirations with BVM if necessary.
3. **(BLS)** Initiate ALS intercept.
4. Elevate the mother's hips.
5. **Do not pull on the cord nor the limb and do not attempt to push them back into the vagina.**

6. In the event of prolapsed cord place a gloved finger/hand in the vagina between the pubic bone and the presenting part with the cord between the fingers and exert counter pressure against the presenting part.
7. Palpate the cord for pulsations.
8. Keep the exposed cord warm and moist.
9. Keep the hand in position and transport immediately.
10. **Contact Medical Control** as soon as possible.


*Optional medication

	Peoria Area EMS System Prehospital Care Manual	Pediatric Protocols	Page
Effective Oct 1, 2021	Pediatric Protocols		129

PAEMS

Pediatric

Protocols

	Peoria Area EMS System Prehospital Care Manual	Pediatric Protocols	Page
Effective Oct 1, 2021	Pediatric Assessment		130

A patient **under the age of sixteen (16)** is considered to be a pediatric patient. Utilization of pediatric treatment guidelines and the extent of care rendered is based on the general impression of the pediatric patient’s condition, physical examination findings and the history of the event. *Patients 16 years or older will be treated with adult protocols.*

The goal of the pediatric patient assessment process is similar to that of the adult patient. However, children are not “little adults”. The causes of catastrophic events, such as cardiac arrest, are most often related to respiratory failure, shock or central nervous system injuries. Early recognition and treatment of the pediatric patient’s injuries or illness is important to ensure the best outcome.

Special attention and awareness must be given to the pediatric patient’s exceptional ability to compensate for respiratory failure and shock. Vital signs are valuable in the assessment of the pediatric patient but do have significant limitations and be dangerously misleading. For example, hypotension is a late and often sudden sign of cardiovascular decompensation. Tachycardia (which varies by age group) will persist until cardiac reserve is depleted. Bradycardia is an ominous sign of impending cardiac arrest.

Infants and children are able to maintain their blood pressure by increasing peripheral vascular resistance (shunting) and heart rate. **The pediatric patient can be in compensated shock and exhibit a normal blood pressure and skin condition.** This increases the importance of the EMS provider understanding of pediatric vital signs and behavior patterns.

The EMS provider must establish a general impression of the pediatric patient. This impression, which is critical, should be done from the doorway of the room. Therefore, the pediatric patient will not be disturbed by a “hands-on” assessment. A simple question to ask yourself is, “How sick is this child?”

Three (3) key areas of importance of a general impression are:

- 1. Appearance**
- 2. Work of breathing**
- 3. Circulation to skin**

Pediatric Assessment Triangle (PAT)

Appearance

The appearance of the pediatric patient should be assessed from the doorway. This is the most important aspect to consider when determining how sick or injured the child is. *Appearance* will give the EMS provider insight on oxygenation, neurological status and ventilation. Remember, the sick child may be alert on the conventional AVPU scale, but still have an abnormal appearance. Children need a more subtle assessment tool so that life-threatening injuries can be identified earlier. A good mnemonic to remember when assessing appearance is “tickles” (TICLS):

Characteristic	Features to look for:
Tone	Is he/she moving or resisting examination vigorously? Does he/she have good muscle tone? Or, is he/she limp, listless or flaccid?
Interactiveness	How alert is the child? How readily does a person, object, or sound distract him/her or draw his/her attention? Will he/she reach for, grasp and play with a toy or exam instrument such as a penlight or tongue blade? Or, is he/she uninterested in playing or interacting with the caregiver or prehospital professional?
Consolability	Can he/she be consoled or comforted by the caregiver or by the prehospital professional? Or, is his/her crying or agitation unrelieved by gentle assurance?
Look/Gaze	Does he/she fix his/her gaze on a face? Or, is there a “nobody home,” glassy-eyed stare?
Speech/Cry	Is his/her cry strong and spontaneous, or weak or high-pitched? Is the content of speech age-appropriate, or confused or garbled?

The *TICLS* Mnemonic (PEPP/AAP 2nd Edition 2006)

Work of Breathing

Assessing work of breathing must go beyond the rate and quality of respirations that is used for adult patients. Work of breathing is an accurate indicator of the oxygenation and ventilation status of the pediatric patient. This is another “hands off” evaluation method in order to avoid disturbing the pediatric patient and causing anymore respiratory distress (other than what is already present).

Characteristic	Features to look for:
Abnormal Airway Sounds	Snoring, muffled or hoarse speech; stridor; grunting; wheezing
Abnormal Positioning	Sniffing position, tripodding, refusing to lie down
Retractions	Supraclavicular, intercostal, or substernal retractions of the chest wall; “head bobbing” in infants
Flaring	Flaring of the nares on inspiration

Characteristics of Work of Breathing (PEPP/AAP 2nd Edition 2006)

Circulation to Skin

A rapid circulatory assessment is needed to determine the perfusion status of the pediatric patient. The key is to assess the core perfusion status of the child. Assessing the skin and mucous membranes can do this. Circulation to the skin reflects the overall status of core circulation.

<i>Characteristic</i>	<i>Features to look for:</i>
Pallor	White or pale skin/mucous membrane coloration from inadequate blood flow
Mottling	Patchy skin discoloration due to vasoconstriction/vasodilation
Cyanosis	Bluish discoloration of skin and mucous membranes

Characteristics of Circulation to Skin (PEPP/AAP 2nd Edition 2006)

Putting it all Together

The goal of pediatric patient care is to identify patients in shock or at risk of shock, initiating care that will directly assist maintaining the patient’s perfusion and safely transporting the patient to an emergency department or trauma center in a timely manner. The benefit of remaining on scene to establish specific treatments versus prompt transport to a definitive care facility should be a consideration of each patient contact. Requesting advanced assistance is another important resource that BLS & ILS providers should consider.

<i>Mechanism</i>	<i>Medical</i>	<i>Traumatic</i>
Hypovolemia	Blood Loss – Internal Bleeding Fluid Loss – Dehydration	Blood Loss – Trauma Fluid Loss – Burns
Cardiogenic (Pump Failure)	Respiratory Failure Airway Obstruction Dysrhythmia	Chest Trauma Pneumothorax Pericardial Tamponade
Vessel Failure	Sepsis Anaphylaxis Chemical/Poisoning Endocrine Dysfunction	Spinal Cord Injury (Neurogenic)

Neonate (0-1 Month):

- Utilization of APGAR Scoring is helpful in assessing the neonate patient.

Infant (1-12 Months):

- Approach the infant slowly and calmly. Fast motion and loud noises may startle or agitate the infant.
- Use warm hands and assessment tools.
- Avoid doing anything potentially painful or distressing until after the assessment is completed.
- Have the caregiver assist in care – this is less threatening to the infant.
- Children over six (6) months of age are usually best examined in the arms of a parent. “Stranger anxiety” may be present and could eliminate other assessment options.
- If needed, calm the infant with a pacifier, blanket or favorite toy.

Toddler (1-3 Years):

- Approach the toddler slowly. Keep physical contact at a minimum until he/she feels familiar with you.
- Perform the assessment at the level of the toddler by sitting or squatting next to them and **allow the toddler to remain in the caregiver’s lap** whenever possible.
- Assessment should be **toe to head**. This is less threatening to the toddler.
- Give limited choices such as “Do you want me to listen to your chest or feel your wrist first?”
- Use simple, concrete terms and continually reassure the toddler.
- Do not expect the toddler to sit still and cooperate – be flexible.

Preschooler (3-5 Years):

- A preschool aged child is a “magical thinker.” Concrete concepts must be described in short, simple terms.
- A preschooler is often very cooperative during the assessment process and may be able to provide a history.
- Questions should be simple and direct.
- Allow the child to handle equipment.
- Use distractions.
- **Do not lie to the child. If the procedure is going to hurt, tell them.**
- Set limits on behavior (*e.g.* “You can cry or scream, but don’t bite or kick.”).

School Age (5-13 Years):

- The school aged child is usually cooperative and can be the primary sources for the patient history.
- Explain all procedures simply and completely and respect the patient’s modesty.
- Substance abuse issues may be present in this age group and should be considered during the care of altered level of consciousness cases.
- Children at this age are afraid of losing control, so let him/her be involved in the care. However, do not negotiate patient care unless the child really has a choice.
- Reassure the child that being ill or injured is not a punishment and praise them for cooperating.

Adolescent (13-16 Years):

- **The adolescent is more of an adult than a child and should be treated as such.** Depending on the nature of the problem, an accurate history may not be possible with parents observing. It may be necessary to separate the parent and child during the assessment.
- Regardless of who is present, respect the patient's modesty. Avoid exposing the adolescent unnecessarily.
- Explain what you are doing and *why* you are doing it!
- Show respect – speak to the adolescent directly. Do not turn to the caregiver for the initial information.

Pediatric Assessment

2. Scene Size-Up

- Note anything suspicious at the scene (*e.g.* medications, household chemicals, other ill family members, etc.).
- Assess for any discrepancies between the history and the patient presentation (*e.g.* infant fell on hard floor but there is carpet throughout the house).

3. General Approach to the Stable/Conscious Pediatric Patient

- Utilize the *PAT (Pediatric Assessment Triangle)* to gain a general impression of the child.
- Assessments and interventions must be tailored to each child in terms of age, size and development.
- Smile, if appropriate to the situation.
- Keep voice at an even, quiet tone – do not yell.
- Speak slowly. Use simple, age appropriate terms.
- Keep small children with their caregiver(s) whenever possible and complete assessment while the caregiver is holding the child.
- Kneel down to the level of the child if possible.
- Be cautious in the use of touch. In the stable child, make as many observations as possible before touching (and potentially upsetting) the child.
- Adolescents may need to be interviewed without their caregivers present if accurate information is to be obtained regarding drug use, alcohol use, LMP, sexual activity or child abuse.
- ❖ Observe general appearance and determine if behavior is age appropriate.
- ❖ Observe for respiratory distress or extreme pain.
- ❖ Look at the position of the child.
- ❖ What is the level of consciousness?
- ❖ Muscle tone: good vs. limp.
- ❖ Movement: spontaneous, purposeful or symmetrical.
- ❖ Color: pink, pale, flushed, cyanotic or mottled.
- ❖ Obvious injuries: bleeding, bruising, gross deformities, etc.
- ❖ **Determine weight** – ask patient, caregiver(s) or use Broselow tape.

4. Initial Assessment

- Airway access/maintenance with c-spine control
 - Maintain with assistance: positioning
 - Maintain with adjuncts: oral airway, nasal airway
 - Listen for any audible airway noises (*e.g.* stridor, snoring, gurgling, wheezing)
 - Patency: suction secretions as necessary
- Breathing
 - Rate & rhythm of respirations – compare to normal rate for age and situation
 - Chest expansion – symmetrical?
 - Breath sounds – compare both sides and listen for sounds (present, absent, normal, abnormal)
 - Positioning – sniffing position, tripod position
 - Work of breathing – retractions, nasal flaring, accessory muscle use, head bobbing, grunting
- Circulation
 - Heart rate – compare to normal rate for age and situation
 - Central pulses (*e.g.* brachial, carotid, femoral) – strong, weak or absent
 - Distal/Peripheral pulses (*e.g.* radial) – present/absent, thready, weak or strong
 - Color – pink, pale, flushed, cyanotic, mottled
 - Skin temperature – hot, warm, cool, or cold
 - Blood pressure – use appropriately sized cuff and compare to normal for the age of the child
 - Hydration status – observe anterior fontanel in infants, mucous membranes, skin turgor, crying tears, urine output, history to determine
- Disability – Brief Neurological Examination:
 - Assess responsiveness – APGAR or TICLS
 - Assess pupils
 - Assess for transient numbness/tingling
- Expose and Examine:
 - Expose the patient as appropriate based on age and severity of illness.
 - Initiate measures to prevent heat loss and keep the child from becoming hypothermic.

5. Rapid Assessment vs. Focused History & Physical Assessment

- Tailor assessment to the needs and age of the patient.
- Rapidly examine areas specific to the chief complaint.
- *Responsive medical patients*: Perform focused assessment based on chief complaint. A full review of systems may not be necessary. If the chief complaint is vague, examine all systems and proceed to detailed exam.
- *Unresponsive medical patients*: Perform rapid assessment (*i.e.* ABCs & a quick head-to-toe exam). Render emergency care based on signs & symptoms, initial impression and standard operating procedures. Proceed to detailed exam.
- *Trauma patients with NO significant mechanism of injury*: Focused assessment is based on specific injury site.
- *Trauma patients with significant mechanism of injury*: Perform rapid assessment of all body systems and then proceed to detailed exam.

6. Detailed Assessment

- SAMPLE history – acquire/incorporate into physical exam.
- Vital signs (*i.e.* pulse, BP, respirations, skin condition, pulse ox)
- Assessment performed (usually en route) to detect non life-threatening conditions and to provide care for those conditions or injuries


7. Ongoing Assessment

- To effectively maintain awareness of changes in the patient's condition, repeated assessments are essential and should be performed **at least every 5 minutes on the unstable patient** and **at least every 15 minutes on the stable patient**.

<i>Normal Pediatric Vital Sign Ranges</i>			
	Heart Rate	Respiratory Rate	Blood Pressure
Infant	100-160 bpm	30-60 rpm	> 60mmHg systolic
Toddler	90-150 bpm	24-40 rpm	> 70mmHg systolic
Preschooler	80-140 bpm	22-34 rpm	> 75mmHg systolic
School Age	70-120 bpm	18-30 rpm	> 80mmHg systolic
Adolescent	60-100 bpm	12-16 rpm	> 90mmHg systolic

Critical Thinking Elements

- Remember: Pediatric patients have extraordinary ability to compensate and may show normal vital signs even though they are in shock.

	Peoria Area EMS System Prehospital Care Manual	Pediatric Protocols	Page
Effective Oct 1, 2021	Routine Pediatric Care		137

First Responder & BLS Care

First Responder & BLS Care should be focused on assessing the situation and establishing initial care to treat and prevent shock:


1. Open and/or maintain an open airway. Have suction equipment readily available to suction nose and mouth as needed.
2. Protect the child from environmental exposure. Give special consideration to the warmth of the infant (*e.g.* cover the head to prevent heat loss).
3. Reassure the patient and caregiver(s). Speak softly and calmly, maintaining conversation and explanation of exam and treatment. Use age-appropriate communication techniques.
4. Patient positioning will be based on assessment / patient condition, age / development and safety. Both the patient and caregiver should have the appropriate safety restraint devices / seat belts in place for transport.
5. Administer oxygen, preferably 10-15 L/min via non-rebreather mask (either on the child's face or holding the mask close to the face). If the patient does not tolerate a mask, then administer 4-6 L/min by nasal cannula.
6. Monitor the patient's level of consciousness, vital signs, etc. for any acute changes.
7. Attach pulse oximeter and obtain analysis, if indicated.
8. Initiate ALS intercept, if indicated (or ILS intercept **if** ALS is unavailable).
9. Establish on-line Medical Control as indicated and continue to reassess patient en route to the hospital.

ILS & ALS Care should be directed at conducting a thorough patient assessment, providing care to treat for shock and preparing or providing patient transportation. The necessity of establishing IV access is determined by the patient's condition and chief complaint. Consideration should also be given to the proximity of the receiving facility.

1. ILS Care includes all of the components of *BLS Care*.
2. If indicated, establish IV access using a 1000mL solution of .9% Normal Saline with macro drip or blood tubing. No more than one (1) attempt should be made on scene. Infuse at a rate to keep the vein open (TKO) – approximately 8 to 15 drops (gtts) per minute. Dependent upon patient condition, consider initiating IV access en route to the hospital.
3. ILS and ALS airway control see Igel BIAD procedure in the procedures manual

Critical Thinking Elements

- When determining the extent of care needed to stabilize the pediatric patient, the EMS provider should take into consideration the patient's presentation, chief complaint, risk of shock and proximity to the receiving facility.
- IV access in pediatric patients is difficult and may complicate the situation. Indications and benefits vs. patient disturbance and complications should be considered.
- If the patient exhibits signs of shock, administer fluid bolus (.9% Normal Saline) at 20mL/kg over 2 minutes.
- If the pediatric patient is in emergent need of fluids and/or medications (*i.e.* cardiac arrest, trauma, decompensated shock or severe burns) and peripheral IV access is unobtainable, proceed with intraosseous infusion (**ALS only**).

	Peoria Area EMS System Prehospital Care Manual	Pediatric Protocols	Page
Effective Oct 1, 2021	Pediatric Pulseless Rhythms Protocol		138

The successful resuscitation of a child in cardiac arrest is dependent on a systematic approach of initiating life-saving high quality CPR, recognition of any airway obstructions, adequate oxygenation & ventilation, early defibrillation and transferring care to advanced life support providers in a timely manner. The majority of pediatric patients found in non-traumatic cardiac arrest are found to have some form of airway obstruction or respiratory failure. Providing good BLS care with regards to relieving foreign body airway obstructions and/or initiating CPR, pediatric patients have a better chance at a positive outcome. Adequate ventilation is the most important step in pediatric resuscitation.

First Responder and BLS Care should be focused on confirming that the patient is in full arrest and in need of CPR. Resuscitative efforts should be initiated by opening the airway and initiating ventilations & chest compressions while attaching a defibrillator. It is important to assure that CPR is being performed correctly following AHA guidelines.

a) If PEDIATRIC PADS are available – apply as pictured on each of the AED electrodes with proper contact and without any overlap of the pads. If overlap of the pads occurs, use anterior (front) / posterior (back) placement with cervical spine precautions if neck/back injury is suspected.

b) If ADULT PADS only – apply anterior /posterior with cervical spine precautions if appropriate.

ILS and ALS Care should focus on maintaining the continuity of care by confirming that the patient is in cardiac arrest and beginning resuscitative efforts or continuing resuscitative efforts initiated by the First Responders and/ or BLS providers and following AHA PALS guidelines.


Asystole, PEA, V-fib, and Pulseless V-tach:

Follow AHA PALS/ BLS Guidelines;

Obtain appropriate peripheral IV or IO access: **Epi 1:10,000-** 0.01 mg/kg-every 3 to5 minutes as needed

Defibrillation Joules **2 J/kg** for 1st defib, **4 J/kg** for subsequent defib attempts

1. If the patient converts to a perfusing rhythm (with a heart rate > 80 bpm), administer **Lidocaine: 1.0mg/kg IV/IO.**
2. If the patient does not return a perfusing rhythm and remains in refractory V-fib or Pulseless V-Tach administer **Lidocaine: 1mg/kg IV/IO.** Repeat bolus: 1mg/kg IV/IO in 3-5 minutes to a total of 3mg/kg. **ALS providers only: Amiodarone: 5mg/kg IV/IO bolus** (300mg max single dose) for persistent V-fib or pulseless V-tach. May repeat 5mg/kg bolus up to 2 times for refractory V-fib and pulseless V-tach to a total of 15mg/kg.
3. Blood Glucose check and if necessary administer **Dextrose: D10 at 5ml/kg IV bolus** if blood sugar is < 60mg/dL. Not to exceed adult dosage of 250ml
4. **Narcan: 0.1mg/kg** (max 2mg) if suspected narcotic overdose.
5. Establish transport and contact **medical control** as soon as possible.

	Peoria Area EMS System Prehospital Care Manual	Pediatric Protocols	Page
Effective Oct 1, 2021	Pediatric Bradycardia		139


Pediatric Bradycardia is defined as a heart rate less than the normal range for a specific age demographic. Determine the stability of the patient and treat the signs and symptoms present. Be aware of signs and symptoms of hypoperfusion.

Age Group	Heart Rate	Respirations	Systolic BP
Preterm	120 - 180	50 - 70	40 - 60
Newborn (0 to 1 Month)	100 - 160	35 - 55	50 - 70
Infant (1 to 12 Months)	80 - 140	30 - 40	70 - 100
Toddler (1 to 3 Years)	80 - 130	20 - 30	70 - 110
Preschool (3 to 6 Years)	80 - 110	20 - 30	80 - 110
School Age (6 to 12 Years)	70 - 100	18 - 24	80 - 120
Adolescents (12+ Years)	60 - 90	14 - 22	100 - 120

First Responder and BLS care should be focused upon providing a thorough patient assessment and providing adequate oxygenation. 15LPM via nonrebreather or 6LPM via nasal cannula if unable to tolerate a mask. For children <12 months of age and a resting heart rate below 60bpm and signs of hypoperfusion begin chest compressions.

ILS and ALS care should be focused on continuing First Responder and BLS care along with a thorough assessment of the patient.

1. Establish IV/IO access and administer **20ml/kg bolus of 0.9 Normal Saline** if hypovolemia is suspected
2. Administer **Epi 1:10,000** 0.01mg/kg IV/IO with a maximum single dose of 1mg (**with Medical Control Orders Only**) every 3-5 minutes as needed.
3. Or for patients older than 6 months administer **Atropine** 0.02mg/kg IV/ IO with a maximum dose of 1mg(**With Medical Control Orders Only**)
4. **ALS ONLY:** Transcutaneous Pacing if the patient remains hypoperfused (**Contact Medical Control for rate**)
5. Administer **Midazolam (Versed)** 0.1mg/kg IV/IO or check IN dosing chart page 45 for comfort during pacing. May repeat dose one time if systolic BP >100mm/hg and respiratory rate is >10/ min. Additional doses require Medical Control orders.
6. Transport and contact **Medical Control** asap.

	Peoria Area EMS System Prehospital Care Manual	Pediatric Protocols	Page
Effective Oct 1, 2021	Pediatric Tachycardia		140

Tachycardia may be specific to anxiety of a specific situation. A thorough assessment must be performed and recognizing the signs and symptoms of hypoperfusion is a must. There may be a history of SVT with patients that have a congenital heart history. SVT is defined as a QRS complex >0.08sec and a rate >220bpm. For wide complex tachycardia there must be a wide complex QRS and a rate >180bpm.


First Responder and BLS care must establish a thorough assessment and administer **Oxygen 15LPM via nonrebreather or 6LPM via nasal cannula** if the patient will not tolerate a mask.

SVT/ Narrow Complex-- ILS and ALS care should be directed at continuing BLS care and establishing a thorough assessment.

1. Establish Peripheral IV access and administer **20ml/kg 0.9 Normal Saline**.
2. Contact **Medical Control** ASAP.
3. **ALS ONLY- (With Medical Control Orders Only per each administration)** administer **Adenosine (Adenocard) 0.1mg/kg IV (max 6mg)** initial dose rapid push. If there is no response administer a second dose at 0.2mg/kg IV (Max 12mg) rapid push.
4. **ALS Only-** Administer **Midazolam (Versed) 0.1mg/kg IV max single dose: 2mg** or IN if unable to establish IV with proper dose from page 45 IN dosage chart for comfort during cardioversion. Patient must have a respiratory rate >10rpm. **Synchronized Cardioversion: 1 J/kg** first attempt and **2 J/kg** subsequent attempts as necessary.

Wide Complex—ILS and ALS care should be directed at continuing BLS care and establishing a thorough assessment

1. Establish Peripheral IV access and administer **20ml/kg 0.9 Normal Saline**.
2. Contact **Medical Control** ASAP.
3. **(With Medical Control Orders Only per each administration)** Administer **Lidocaine 1mg/kg** slowly over 2 minutes if the child is alert. If no response administer **Lidocaine 0.5mg/kg** every 5 minutes as needed to a total of 3mg/kg
4. **ALS Only-** Administer **Midazolam (Versed) 0.1mg/kg IV max single dose: 2mg** or IN if unable to establish IV with proper dose from page 45 IN dosage chart for comfort during cardioversion. Patient must have a respiratory rate >10rpm. **Synchronized Cardioversion: 1 J/kg** first attempt and **2 J/kg** subsequent attempts as necessary.

	Peoria Area EMS System Prehospital Care Manual	Pediatric Protocols	Page
Effective Oct 1, 2021	Pediatric Respiratory Distress Protocol		141

Respiratory distress is common in the pediatric patient. The small airways of children are compromised more quickly during medical and traumatic problems. Identifying the degree of respiratory distress is crucial for stopping a process that can lead into respiratory failure. At that point, the child has lost ability to compensate for the lack of oxygen. If not treated immediately, respiratory failure will lead to arrest.

EMR, BLS, and ILS Care should be focused on assessing the situation and initiating routine patient care to treat for shock.

1. Render initial care in accordance with the Routine Pediatric Care Protocol.
2. **Oxygen: 15 L/min** via non-rebreather mask or 6 L/min via nasal cannula if the patient does not tolerate a mask. Be prepared to support with BVM if necessary.
3. **Proventil (Albuterol): 2.5mg** in 3mL of normal saline via nebulizer mixed with **Ipratropium (Atrovent): 0.5mg** via nebulizer over 15 minutes. Repeat **Albuterol 2.5mg with Atrovent 0.5mg** every 15 minutes as needed. In-line nebulizer may be utilized if patient is unresponsive or in respiratory arrest. May repeat every 15 minutes as needed (with Medical Control order)
4. If the patient has a tracheostomy tube and it is obstructed with secretions suction with whistle-tip catheter. Repeat suction after removing inner catheter of tracheostomy tube and have caregiver change tracheostomy tube.
If the airway continues to be obstructed or if ventilatory effort is inadequate, ventilate with 100% oxygen by attaching a BVM to the tracheostomy tube or ventilate mask to mouth while covering the stoma.
 - The balloon on the trach must be deflated prior to attempting mask to mouth ventilation.
5. Initiate ALS intercept and transport as soon as possible.

ALS Care should be directed at continuing or establishing care, conducting a thorough patient assessment, stabilizing the patient's perfusion and preparing for or providing patient transport.

1. **Proventil (Albuterol): 2.5mg** in 3mL normal saline mixed with **Ipratropium (Atrovent): 0.5mg** via nebulizer over 15 minutes. Repeat **Albuterol 2.5mg with Atrovent 0.5mg** every 15 minutes as needed. In-line nebulizer may be utilized if patient is unresponsive or in respiratory arrest.
2. **Epinephrine 1:1000: 0.01mg/kg IM** (Max single dose: 0.3mg) if the patient is suffering status asthmaticus and does not improve with nebulizer treatment. May repeat every 20 minutes.
3. **ALS Only-** Patients with persistent respiratory distress consider **Solu-Medrol: 1mg/kg IV** (max 125mg)
4. Transport as soon as possible. Contact the receiving hospital as soon as possible or Medical Control if necessary.


If Epiglottitis is suspected: EMR Care, BLS Care, ILS Care, & ALS Care

1. Initiate Routine Pediatric Care Protocol.
2. Do not look in the child's mouth or attempt to visualize the interior of the throat, & do not agitate the child.

4. **Oxygen: 10-15 L/min** via non-rebreather mask or by best means tolerated by the patient (e.g. blow-by or 4-6 L/min via nasal cannula).
5. Transport the child sitting up.

If an advanced airway is needed and you are comfortable with the procedure, you may attempt to control the airway using endotracheal intubation. (Patient MUST be greater than 8 years old.) If not, consider controlling the airway using a BIAD. (Refer to Igel BIAD procedure Pg. 51.)

Needle chest decompression on the affected side with a 14g, 16g, or 18g IV catheter if tension pneumothorax is suspected. **(with Medical Control order ONLY!!!!)**

	Peoria Area EMS System Prehospital Care Manual	Pediatric Protocols	Page
Effective Oct 1, 2021	Pediatric ALOC Protocol		143

First Responder & BLS Care should be directed at establishing care, conducting a thorough patient assessment, stabilizing the patient and preparing for or providing patient transport.


1. Render initial care in accordance with the Routine Pediatric Care Protocol.
2. **Oxygen: 10-15 L/min via non-rebreather mask or 4-6 L/min** via nasal cannula if the patient does not tolerate a mask.
3. Perform blood glucose level test.
4. **Oral Glucose: 15g PO** if the patient's blood sugar is < 60mg/dL, the patient is alert to verbal stimuli, is able to sit in an upright position, has good airway control and has an intact gag reflex.
5. Perform a 2nd blood glucose level test to re-evaluate blood sugar 5 minutes after administration of Glucagon.

ILS & ALS Care should be directed at continuing or establishing care, conducting a thorough patient assessment, stabilizing the patient's perfusion and preparing for or providing patient transport.

1. Render initial care in accordance with the *Routine Pediatric Care Protocol*.
2. **Oxygen: 10-15 L/min via non-rebreather mask or 4-6 L/min** via nasal cannula if the patient does not tolerate a mask.
3. Perform **blood glucose level test**.
4. **Oral Glucose: 15g PO** if the patient's blood sugar is < 60mg/dL, the patient is alert to verbal stimuli, is able to sit in an upright position, has good airway control and has an intact gag reflex.
5. **Oral Glucose: 15g PO** if the patient's blood sugar is < 60mg/dL, the patient is alert to verbal stimuli, is able to sit in an upright position, has good airway control and has an intact gag reflex.
6. **Dextrose D10: 5ml/kg** if blood sugar is < 60mg/dL. Not to exceed adult dosage of 250ml.
7. Perform a 2nd **blood glucose level test** to re-evaluate blood sugar 5 minutes after administration of Dextrose or Glucagon. Repeat dose of Dextrose if BG is still < 60mg/dL.
8. **Glucagon: 1mg IM** if the patient's blood sugar is < 60mg/dL and unable to establish an IV.
9. **Narcan: 0.1mg/kg IV/IM/IO (Max single dose: 2mg)** if suspected narcotic overdose.
10. Initiate ALS intercept if needed and transport as soon as possible.
11. **Contact Medical Control** as soon as possible.

Critical Thinking Elements

- ALOC in a child can range from trauma to a systemic infection (sepsis). A good medical history might provide clues as to the reason for the ALOC.
- Accidental overdose/ingestion of medications can be a cause of the ALOC.

	Peoria Area EMS System Prehospital Care Manual	Pediatric Protocols	Page
Effective Oct 1, 2021	Pediatric Seizure Protocol		144

Seizures are common in childhood. About 5% of all children will have at least one seizure by the age of three (febrile seizures account for the largest percentage of pediatric seizures). This condition can cause much concern and anxiety in the caregiver and EMS is called. Pediatric seizures are usually short-lived and stop before the arrival of EMS. Since there are many causes of pediatric seizures, treatment and transport to an appropriately equipped emergency department is necessary.

<i>Classification of Seizures (PEPP 2001)</i>	
Generalized Seizure	Description
Tonic-Clonic (Grand Mal Seizure)	Trunk rigidity and loss of consciousness with sudden, jerking movements of both arms and/or both legs; may be only tonic (rigidity) or clonic (jerking) seizure activity.
Absence (Petit Mal Seizure)	Brief loss of awareness without any abnormal movements; child may appear to be staring.
Partial (Focal) Seizure	Description
Simple Seizure	Focal motor jerking without loss of consciousness; may be sensory, autonomic or psychic without jerking.
Complex Seizure	Focal motor jerking with loss of consciousness; secondary generalization to a tonic-clonic seizure.

First Responder & BLS Care should be focused on assessing the situation and initiating routine patient care to assure that the patient has a patent airway, is breathing and has a perfusing pulse as well as beginning treatment for shock.

1. Render initial care in accordance with the *Routine Pediatric Care Protocol*.
2. **Oxygen: 10-15 L/min via non-rebreather mask or 4-6 L/min** via nasal cannula if the patient cannot tolerate a mask. Be prepared to support the patient's respirations with BVM if necessary and have suction readily available.
3. Perform **blood glucose level test**.
4. Initiate ALS intercept and **transport without delay**.
5. Check and record vital signs and GCS every **5 minutes**.


ILS & ALS Care should be directed at continuing or establishing care, conducting a thorough patient assessment, stabilizing the patient's perfusion and preparing for or providing patient transport.

1. Render initial care in accordance with the *Routine Pediatric Care Protocol*.
2. **Oxygen: 10-15 L/min via non-rebreather mask or 4-6 L/min** via nasal cannula if the patient does not tolerate a mask. Be prepared to support the patient's respirations with BVM if necessary and have suction readily available.
3. Perform **blood glucose level test**.
4. **Dextrose D10: 5ml/kg** if blood sugar is < 60mg/dL. Not to exceed adult dosage of 250ml.

5. **Glucagon**: 1mg IM if the patient's blood sugar is < 60mg/dL and unable to establish an IV.
6. Perform a 2nd **blood glucose level test** to re-evaluate blood sugar 5 minutes after administration of Dextrose or Glucagon. Repeat dose of Dextrose if BG is still < 60mg/dL.
7. **Contact Medical Control** as soon as possible.
8. **Midazolam (Versed)**: **0.1mg/kg IV (Max single dose: 2mg)** over 1 minute for seizure activity. May repeat **Midazolam (Versed) 0.1mg/kg IV** every **5 minutes** as needed to a total of 10mg.
9. **Midazolam (Versed)**: **0.2mg/kg IM (Max single dose: 5mg)** if the patient is seizing and attempts at IV access have been unsuccessful. May repeat dose one time in **15 minutes** if the patient is still seizing.
10. **Midazolam (Versed)**: Versed Intranasal may also be used if unable to give IV Versed. (See **intranasal dosing sheet Pg. 45**).
11. Initiate ALS intercept if needed and transport as soon as possible.

Critical Thinking Elements

- Benzodiazepines can cause severe respiratory depression. Monitor the child's respiratory status, SPO2 and or Wave Form Capnography if available. Ventilate if needed.
- Seizure activity usually indicates a serious underlying problem. Check the oxygenation and perfusion of the child along with the blood glucose level and temperature. Treat accordingly.

	Peoria Area EMS System Prehospital Care Manual	Pediatric Protocols	Page
Effective Oct 1, 2021	Pediatric Anaphylaxis Protocol		146


Allergic reactions or anaphylaxis in children can cause respiratory distress very quickly in pediatric patients due to the small size of the airway. Bee stings and nuts are the primary reason of anaphylaxis in children.

First Responder & BLS Care should be focused on assessing the situation and initiating routine patient care to assure that the patient has a patent airway, is breathing and has a perfusing pulse as well as beginning treatment for shock.

1. Render initial care in accordance with the *Routine Pediatric Care Protocol*.
2. **Oxygen: 10-15 L/min** via non-rebreather mask or 4-6 L/min via nasal cannula if the patient does not tolerate a mask. Be prepared to support the patient's respirations with BVM if necessary.
3. Initiate ALS intercept and transport as soon as possible.
4. **Epinephrine 1:1000: 0.15mg IM** if the patient has respiratory distress (inspiratory & expiratory wheezing, stridor and/or laryngeal edema), hypotension and/or ALOC.
5. **Proventil (Albuterol): 2.5mg** in 3mL normal saline via nebulizer over 15 minutes.
BLS only: Ipratropium (Atrovent): 0.5mg via nebulizer over 15 minutes. May repeat Albuterol 2.5mg with Atrovent 0.5mg every 15 minutes. In-line nebulizer may be utilized if patient is unresponsive or in respiratory arrest.
6. **Benadryl: (BLS Only) 50mg** chewable tablets for severe itching and/or hives.
7. **Contact Medical Control** as soon as possible.

ILS & ALS Care should be directed at continuing or establishing care, conducting a thorough patient assessment, stabilizing the patient's perfusion and preparing for or providing patient transport.

8. Render initial care in accordance with the *Routine Pediatric Care Protocol*.
9. **Oxygen: 10-15 L/min** via non-rebreather mask or 4-6 L/min via nasal cannula if the patient does not tolerate a mask. Be prepared to support the patient's respirations with BVM if necessary.
10. **Epinephrine 1:1000: 0.01mg/kg IM (Max single dose: 0.3mg)** if the patient has respiratory distress (inspiratory & expiratory wheezing, stridor and/or laryngeal edema), hypotension and/or ALOC.
11. **Proventil (Albuterol): 2.5mg** in 3mL normal saline via nebulizer over 15 minutes mixed with **Ipratropium (Atrovent): 0.5mg** via nebulizer over 15 minutes. May repeat **Albuterol 2.5mg** with **Atrovent 0.5mg** every 15 minutes. In-line nebulizer may be utilized if patient is unresponsive or in respiratory arrest.
12. **Benadryl: 1mg/kg** IV or IM (**Max single dose: 50mg**) for severe itching and/or hives.
13. **ALS Only-Solu-Medrol: 1mg/kg** IV (max 125mg)
14. **IV Fluid Therapy: 20mL/kg** fluid bolus if patient is hypotensive. May repeat x2 to a maximum of 60mL/kg (**Note:** Exceeding 40mL/kg requires **Medical Control order**).
15. Transport as soon as possible.
16. Contact the receiving hospital as soon as possible.

	Peoria Area EMS System Prehospital Care Manual	Pediatric Protocols	Page
Effective Oct 1, 2021	Pediatric OD, Toxic Exposure Protocol		147

This protocol focuses on two problems. First, exposure to a chemical substance that causes adverse medical effects. Secondly, the protocol covers accidental or intentional ingestion of harmful substances into the body. Toddlers explore their environment with all five senses and ingestion of toxic substances is common for this age group. The adolescent age group deals mainly with intentional overdoses due to attempted suicide or recreational pharmaceuticals & alcohol use.


1. If the scene is considered a *Hazardous Materials* incident, do not treat patients unless they are decontaminated or proper precautions have been implemented to protect EMS personnel.
2. In the event that the patient has not been decontaminated when EMS makes patient contact, removing all of patient's clothing takes away 80-90% of the contaminated materials. Get patient to decontamination area as soon as possible.
3. If there is no patient contact but EMS has determined this to be a *Hazardous Materials* incident, **do not enter the scene under any circumstances**. Refer to PAEMS *Disaster Protocols*.

First Responder & BLS Care should be focused on assessing the situation and initiating routine patient care to assure that the patient has a patent airway, is breathing and has a perfusing pulse as well as beginning treatment for shock.

5. Consider possible scene & patient contamination and follow agency safety procedures.
6. Render initial care in accordance with the *Routine Pediatric Care Protocol*.
7. **Oxygen: 10-15 L/min** via non-rebreather mask or 4-6 L/min via nasal cannula if the patient cannot tolerate a mask. Be prepared to support the patient's respirations with BVM if necessary.

ILS & ALS Care should be directed at continuing or establishing care, conducting a thorough patient assessment, stabilizing the patient's perfusion and preparing for or providing patient transport.

1. Consider possible scene & patient contamination and follow agency safety procedures.
2. Render initial care in accordance with the *Routine Pediatric Care Protocol*.
3. **Oxygen: 10-15 L/min via non-rebreather mask or 4-6 L/min** via nasal cannula if the patient does not tolerate a mask. Be prepared to support the patient's respirations with BVM if necessary and have suction readily available.
4. **IV Fluid Therapy: 20mL/kg** fluid bolus if the patient is hypotensive. May repeat bolus x 2 to a maximum of 60mL/kg (**Note:** Exceeding 40mL/kg requires **Medical Control order**).
5. If patient is seizing, follow the *Pediatric Seizure Protocol*.
6. **Narcan: 0.1mg/kg IV/IM//IN (Max single dose: 2mg)** if suspected narcotic overdose.
7. Initiate ALS intercept if needed and transport as soon as possible.
8. **Contact Medical Control** as soon as possible.
9. **ALS Only- Sodium Bicarbonate: 1mEq/kg IV (Max single dose: 50meq) (with Medical Control order only)** if known tricyclic antidepressant (TCA) or Aspirin (ASA) overdose.
10. **ALS Only-** If the patient has signs & symptoms of *organophosphate poisoning* or *nerve agent* exposure, **contact Medical Control:**
 - i. Ensure that the patient has been decontaminated prior to transport.
 - ii. **Atropine: 0.02mg/kg IV (Max single dose: 2mg)** or **Atropine: 0.05mg/kg IM (Max single dose: 2mg)** every 5 minutes until symptoms are suppressed.

	Peoria Area EMS System Prehospital Care Manual	Pediatric Protocols	Page
Effective Oct 1, 2021	Pediatric Pain Protocol		148

Pain, and the lack of relief from the pain, is one of the most common complaints among patients. Pediatric pain must not be ignored and must be identified and treated if appropriate. The prehospital provider must use clinical observations and a pain scale to rate the pain of the child.

First Responder & BLS Care should focus on the reduction of the patient’s anxiety due to the pain.

1. Render initial care in accordance with the *Routine Pediatric Care Protocol*.
2. Assess level of pain using the *Pain Assessment Scale (0-10)* or the *Wong-Baker Faces Pain Rating Scale*.
3. Place patient in a position of comfort.
4. Reassure the patient.
5. Use distraction therapy to help reduce the patient’s anxiety (e.g. stuffed animals, discussing favorite foods, toys, etc.)
6. Consider ice or splinting.
7. Reassess level of pain using the approved pain scale.


ILS & ALS Care should focus on the reduction of the patient’s anxiety due to the pain.

Fentanyl: **1mcg/kg IV** over 2 minutes for pain (**Max single dose: 50mcg**). **Fentanyl 1mcg/kg** may be repeated every **5 minutes**. (Total of 100 mcg). **Fentanyl:** Fentanyl Intranasal may also be used if unable to give IV Fentanyl. (See dosing sheet Pg. 47).

Fentanyl	1mcg/kg IV over 2 minutes for pain (max single dose: 50mcg). Fentanyl 1mcg/kg may be repeated every 5 minutes. (Total of 100 mcg).
	If unable to establish IV access , may administer Intranasal Fentanyl. (See intranasal dosing sheet Pg. 50).

Critical Thinking Elements

- Consider sucrose for infants from birth to 4 months for minor procedural pain, or for additional pain control when used with other pharmacologic agents.
 - Apply directly onto the infant’s anterior tongue and immediately provide the infant with a pacifier for non-nutritive sucking, OR
 - Dip the tip of a pacifier into the sucrose solution and provide to the infant.
 - If pacifier not available, may use tip of a gloved finger to apply.
 - A maximum of 3 doses may be given in one hour.
- Note:** Do not administer sucrose solution by bottle or through a nipple. Sucrose solution must be absorbed via the mucous membranes and not swallowed.
- Closely monitor the patient’s airway – have BVM and suction readily available.

	Peoria Area EMS System Prehospital Care Manual	Pediatric Protocols	Page
Effective Oct 1, 2021	Routine Pediatric Trauma Care		149

The majority of pediatric contacts the prehospital professional will face involve traumatic injuries. Trauma care in the pediatric patient must be aggressive, due to the child’s ability to compensate and mask otherwise obvious signs and symptoms of shock. Early recognition of potential life-threatening injuries due to trauma will help save the pediatric patient.

In addition, pediatric patients may not always have obvious injuries. The anatomical position and size of internal organs are drastically different compared to the adult trauma patient. Children may not bruise or show marks of impact, thus disguising underlying life-threatening problems. When the pediatric patient presents as a possible trauma patient, treat them as such. Stay within the “*platinum 10 minutes*” of scene time, effectively immobilize the spine, keep the child warm and treat pain and anxiety.

EMR Care, BLS Care, ILS Care, ALS Care

1. Scene Assessment (Scene Size-Up)

- a. Ensure scene safety – identify any hazards (e.g. fire, downed power lines, unstable vehicle, leaking fuel, weapons).
- b. Determine the number of patients.
- c. Identify the **mechanism of injury** (gunshot wound, vehicle rollover, high speed crash, ejection from the vehicle).
- d. Identify special extrication needs, if any.
- e. Call for additional resources if needed.

2. Primary Survey (Initial Assessment)

- a. *The purpose of the primary assessment is for the prehospital provider to rapidly identify and manage life-threatening conditions:*
- b. Obtain a general impression of the patient’s condition.
- c. Assess, secure and maintain a patent airway while simultaneously using C-spine precautions.
- d. Assess breathing and respiratory effort:
 - i. Approximate respiratory rate.
 - ii. Assess quality of respiratory effort (depth of ventilation and movement of air).
 - iii. **Oxygen:** 15 L/min via non-rebreather mask. Be prepared to suction the airway and support the patient’s respirations with BVM if necessary.

3. Primary Survey (Initial Assessment) (continued)

- a. Assess circulation:
 - i. Evaluate carotid and radial pulses.
 - ii. Evaluate skin color, temperature and condition.
 - iii. Immediately control major external bleeding.
- b. **Critical Decision** (based on mechanism of injury & initial exam):
 - i. Limit scene time to 10 minutes or < if the patient has a significant mechanism of injury or meets “Load & Go” criteria.
- c. Determine disability:
 - i. **T – Tone**
 - ii. **I – Interactiveness**
 - iii. **C – Consolability**

iv. **L – Look/Gaze**

v. **S – Speech/Cry**

- d. Expose the patient:
- i. Cut the patient's clothing away quickly to adequately assess for the presence (or absence) of injuries.

4. Secondary Survey (Focused History & Physical Exam)

- a. *The secondary survey is a head-to-toe evaluation of the patient. The object of this survey is to identify injuries or problems that were not identified during the primary survey.*
- b. Examine the head:
 - i. Search for any soft tissue injuries.
 - ii. Palpate the bones of the face & skull to identify deformity, depression, crepitus or other injury.
 - iii. Check pupils for size, reactivity to light, equality, accommodation, roundness and shape.
- c. Examine the neck:
 - i. Examine for contusions, abrasions, lacerations or other injury.
 - ii. Check for JVD, tracheal deviation, deformity.
 - iii. Palpate the c-spine for deformity & tenderness.
- d. Examine the chest:
 - i. Closely examine for deformity, contusions, redness, abrasions, lacerations, penetrating trauma or other injury.
 - ii. Look for flail segments, paradoxical movement & crepitus.
 - iii. Auscultate breath sounds.
 - iv. Watch for supraclavicular and intercostals retractions.
- e. Examine the abdomen:
 - i. Examine for contusions, redness, abrasions, lacerations, penetrating trauma or other injury.
 - ii. Palpate the abdomen and examine for tenderness, rigidity and distention.
- f. Examine the pelvis:
 - i. Examine for contusions, redness, abrasions, lacerations, deformity or other injury.
 - ii. Palpate for instability and crepitus.

5. Secondary Survey (Focused History & Physical Exam) (continued)

- a. Examine the back:
 - i. Log roll with a minimum of 2 rescuers protecting the spine.
 - ii. Look for contusions, abrasions, lacerations, penetrating trauma, deformity or any other injury.
 - iii. Log roll onto long spine board with padding or approved pediatric spinal immobilization device.
- b. Examine the extremities:
 - i. Examine for contusions abrasions, lacerations, penetrating trauma, deformity or any other injury.
 - ii. Manage injuries en route to the hospital.
- c. Neurological exam:
 - i. Calculate Glasgow Coma Scale (GCS)
 - ii. Reassess pupils
 - iii. Assess grip strength & equality and sensation.
 - iv. Calculate Revised Trauma Score (RTS)

- d. Vital signs:
 - i. Blood pressure
 - ii. Pulse
 - iii. Respirations
 - iv. Pulse Oximetry
- e. History:
 - i. Obtain a SAMPLE history if possible.
 - ii. Signs & symptoms
 - iii. Allergies
 - iv. Medications
 - v. Past medical history
 - vi. Last oral intake
 - vii. Events of the incident

6. Secondary Survey (Focused History & Physical Exam) (continued)

7. Interventions (en route)

- a. Cardiac monitor
- b. Blood glucose level
- c. IV access / fluid bolus
- d. Wound care
- e. Splinting

8. Monitoring and Reassessment (Ongoing Assessment)

9. Evaluate effectiveness of interventions

10. Vital signs every 5 minutes

11. Reassess mental status (GCS) every 5 minutes


12. CONTACT MEDICAL CONTROL AS SOON AS POSSIBLE

Critical Thinking Elements

- Prompt transport with EARLY Medical Control contact & receiving hospital notification will expedite the care of the trauma patient.
- IVs should be established en route to the hospital thereby not delaying transport of critical trauma patients (unless scene time is extended due to prolonged extrication).
- Trauma patients should be transported to the closest most appropriate Trauma Center. Medical Control should be contacted immediately if there is ANY question as to which Trauma Center the patient should be transported to.
- Children are prone to hypothermia in traumatic situations – keep the patient warm!!!!

Pediatric Glasgow Coma Scale

ACTIVITY	SCORE	INFANTS	CHILDREN
Eye Opening	4	Spontaneous	Spontaneous
	3	To speech or sound	To speech
	2	To painful stimuli	To painful stimuli
	1	None	None
Verbal	5	Appropriate words or sounds, social smile, fixes and follows	Oriented
	4	Cries, but consolable	Confused
	3	Persistently irritable	Inappropriate words
	2	Restless, agitated	Incomprehensible sounds
	1	None	None
Motor	6	Spontaneous movement	Obeys commands
	5	Localizes to pain	Localizes to pain
	4	Withdraws to pain	Withdraws to pain
	3	Abnormal flexion (decorticate)	Abnormal flexion (decorticate)
	2	Abnormal extension (decerebrate)	Abnormal extension (decerebrate)
	1	None	None
13-15 Minor head injury 9-15 Moderate head injury ≤ 8 Severe head injury / Coma			

	Peoria Area EMS System Prehospital Care Manual	Pediatric Protocols	Page
Effective Oct 1, 2021	Suspected Child Maltreatment		153

Illinois state law mandates that EMS providers report any suspicious acts of suspected maltreatment. There is no profile of the “typical” family in which abuse is taking place. Maltreatment of children affects all socio-economic classes. As EMS professionals, we need to be aware of the warning signs, treat the injuries of the child and report accordingly.

EMR Care, BLS Care, ILS Care, ALS Care


1. Consider scene safety issues:
 - a) If the offender is present and interferes with transportation of the patient, or is influencing the patient’s acceptance of medical care, contact law enforcement and Medical Control for consultation on the appropriate action to take.
 - b) If the parent/guardian refuses to allow transportation of the child, contact law enforcement and Medical Control for consultation on the appropriate action to take.
2. Render initial care in accordance with the *Routine Pediatric Care Protocol*.
3. Treat obvious injuries or illnesses.
4. Survey the scene for evidence of factors that could adversely affect the child’s welfare:
 - b) Environmental
 - c) Interaction with parents/guardians
 - d) Discrepancies in the history of events
 - e) Injury patterns inconsistent with history of events or anticipated motor skills based on the child’s growth and development stage.
 - f) Signs of intentional injury or emotional harm.
5. Transport regardless of extent of injuries.
6. Upon arrival at the ED, notify the receiving physician or nurse of the suspected maltreatment.

Remember – healthcare workers (including EMTs/Paramedics) are mandated by Illinois state law to report cases of suspected abuse or neglect to the Department of Children and Family Services (DCFS) by calling 1-800-252-2873.
7. **Thoroughly document** the child’s history & physical exam findings.
8. The following information / telephone numbers regarding services available to victims of abuse shall be offered to all victims of abuse:

Center for Prevention of Abuse Phone (309)691-0551
Crime Victims Compensation Phone (312)814-2581 or (800)228-3368 TTY (312)814-3374
Illinois Child Abuse Hotline Phone (800)252-2873 TTY (800)358-5117

Critical Thinking Elements

- At no time should EMS confront the caregivers about the abuse.
- Do not make accusations on the PCR. Document objective physical findings, not opinion.
- A copy of the *Manual for Mandated Reporters* can be downloaded at www.state.il.us/dcfs.
- Willful failure to report suspected incidents of child abuse/neglect is a misdemeanor (1st violation) or a class 4 felony (2nd or subsequent violations).
- Reports must be confirmed in writing to the local investigation unit within 48 hours of the Hotline call.

	Peoria Area EMS System Prehospital Care Manual	Pediatric Protocols	Page
Effective Oct 1, 2021	Suspected SIDS		154

Sudden Infant Death Syndrome (SIDS) and the death of a child are among the most difficult patient care experiences for the prehospital professional. SIDS is the leading cause of infant mortality in the United States and the causes are not known.

The death of a child is a horrible event and creates difficult emotional issues for the caregivers as well as for the prehospital professional. The infant may be in the care of a parent/caregiver or babysitter at the time of death and may not be at home. Absence of one or both parents may complicate field management and interactions at the scene (PEPP 2001).

EMR Care, BLS Care, ILS Care, ALS Care

1. Render initial care in accordance with the *Routine Pediatric Care Protocol*.
2. **If obvious signs of biological death are present** (*pulseless, apneic, cold skin, frothy/blood tinged fluid in the mouth, lividity, dark red mottling on the body, rigor mortis*)
 - a) Confirm absence of breathing and pulse.
 - b) Confirm asystole in two (2) or more leads.
 - c) **Contact Medical Control** and follow procedures for death at scene.
 - d) Provide for the needs of the family:
 - Have at least one prehospital professional stay with the family until a support network is established.
 - Contact support personnel:
 - ❖ Clergy
 - ❖ Other family members
 - ❖ Friends
 - ❖ Professional counselors
3. Consider the possibility of child maltreatment:
 - b) Refer to *Suspected Child Maltreatment Protocol*.
 - c) Obtain past medical history and the history of events.
 - Refrain from asking judgmental or leading questions.
 - Do not place blame or accusations.
4. Consider CISM for prehospital personnel.

Critical Thinking Elements

- The decision of staying on scene or transporting a dead infant to the ED is a difficult one. Consider these factors:
 - a) Could this be a crime scene?
 - b) Am I giving false hope to the family?
- The prehospital caregiver cannot determine the true cause of death in an infant. Therefore, do not rush to judgment. Treat every caregiver as a grieving parent regardless of the situation.
- There are nearly 3000 SIDS cases per year in the United States:
 - a) 90-95% of SIDS cases are less than 6 months old.
 - b) Premature infants are at higher risk for SIDS
 - c) SIDS cases occur more frequently in males & during the winter months.
 - d) 5% of SIDS cases are actually due to child neglect.



OSF
HEALTHCARE

Peoria Area EMS System Prehospital Care Manual

Supplies


Page

Effective Oct 1, 2021

Supplies

155

PAEMS Supplies Section

	Peoria Area EMS System Prehospital Care Manual	Supplies	Page
Effective Oct 1, 2021	PAEMS Supply Policy		156

Peoria Area EMS System providers must maintain response vehicles in a manner that will limit mechanical breakdown, provide a clean environment and be engineered for compliance with OSHA standards. Providers must also have minimum equipment and supplies specified by IDPH and the EMS Medical Director.

1. EMS providers shall notify the EMS Office and IDPH of any new or replacement vehicles (including temporary loaner vehicles).
2. Initial response vehicles (First Responder and BLS Non-transport units) shall be equipped and stocked in accordance with the IDPH *Non-Transport Vehicle Inspection Form*.
3. Ambulance (transporting) vehicles must meet general standards as specified on the IDPH *Ambulance Inspection Form* and be in compliance with DOT Standard KKK-A-1822D.
4. BLS transporting vehicles shall be equipped and supplied in accordance with the IDPH *Ambulance Inspection Form* and in accordance with Section 515.830 of IDPH Rules and Regulations. Additional requirements have been set forth by the EMS Medical Director as well. Refer to the *Peoria Area EMS System Agency Supply List*.
5. ILS providers shall be equipped and supplied in accordance with the IDPH *Ambulance Inspection Form* and in accordance with Section 515.830 of IDPH Rules and Regulations. Additional requirements have been set forth by the EMS Medical Director as well. Refer to the *Peoria Area EMS System Agency Supply List* and *Additional ILS Equipment List*.
6. ALS providers shall be equipped and supplied in accordance with the IDPH *Ambulance Inspection Form* and in accordance with Section 515.830 of IDPH Rules and Regulations. Additional requirements have been set forth by the EMS Medical Director as well. Refer to the *Peoria Area EMS System Agency Supply List* and *Additional ALS Equipment List*.
7. The addition of new equipment not listed on a specific EMS provider level checklist **requires approval by the EMS Medical Director**. In addition, the EMS Medical Director must be notified of and approve any change in AEDs or cardiac monitoring equipment as well as any changes in communications equipment that may affect Base Station communications.

**EMR (First Responder) Medications**

Unit Stock	Medication	Supplied	Expiration/ Notes
3	Oral Glucose	15g Tube	
1	Narcan (Naloxone)	2mg/2ml	
5	Albuterol	2.5mg/ 3ml	
1	Aspirin chewable	1 bottle 81mg	
1	EpiPen Auto-Injector	0.3mg pre filled	Expanded scope only

EMT (Emergency Medical Technician) Medications

Unit Stock	Medication	Supplied	Expiration/ Notes
5	Albuterol	2.5mg/ 3ml	
5	Atrovent (Ipratoprium)	0.5mg/ 2.5ml	
1	Aspirin chewable	1 bottle 81mg	
2	Benadryl (Diphenhydramine)	50mg PO	Chewable or liquid
1	EpiPen Auto Injector	0.3mg pre filled	
1	EpiPen Auto Injector	0.15mg pre filled	
1 alt	Epinepherine (Adrenalin)	1mg/1ml	
1	Glucagon	1mg	
1	Nitroglycerine	1 bottle 0.4mg	
3	Oral Glucose	15g Tube	
1	Narcan (Naloxone)	2mg/2ml	
2	Zofran (Ondansetron)	4mg dissolvable	

ILS Medications

Unit Stock	Medication	Supplied	Expiration/ Notes
5	Albuterol	2.5mg/ 3ml	
5	Atrovent (Ipratoprium)	0.5mg/ 2.5ml	
1	Aspirin chewable	1 bottle 81mg	
3	Atropine	1mg/ 10ml	
2	Benadryl (Diphenhydramine)	50mg/ 1ml	
2	Dextrose D50	25g/ 50ml	
1	Epinepherine (Adrenalin)	1mg/1ml optional	
6	Epinepherine (Adrenalin)	1mg/ 10ml	
1	Glucagon	1mg	
4	Lidocaine	100mg/ 5ml	
1	Nitroglycerine	1 bottle 0.4mg	
5	Nitro Paste	1mg pkg	
3	Oral Glucose	15g Tube	
1	Narcan (Naloxone)	2mg/2ml	
2	Zofran (Ondansetron)	4mg dissolvable	
2	Zofran (Ondansetron)	4mg/2ml	
	Controlled Substances		
2	Fentanyl	100mcg/ 2ml	
2	Versed (Midazolam)	10mg/ 2ml	
2	Versed (Midazolam)	5mg/5ml	

Paramedic Medications

Unit Stock	Medication	Supplied	Expiration/ Notes
3	Adenosine (Adenocard)	6mg/ 2ml	
5	Albuterol	2.5mg/ 3ml	
3	Amioderone	150mg/ 3ml	
5	Atrovent (Ipratoprium)	0.5mg/ 2.5ml	
1	Aspirin chewable	1 bottle 81mg	
3	Atropine	1mg/ 10ml	
2	Benadryl (Diphenhydramine)	50mg/ 1ml	
2	Dextrose D50	25g/ 50ml	
2	Diltiazem (Cardizem)	25mg/ 5ml	
1	Epinepherine 1:1,000(Adrenalin)	1mg/1ml optional	
6	Epinepherine 1:10,000(Adrenaline)	1mg/ 10ml	
1	Glucagon	1mg	
4	Lidocaine	100mg/ 5ml	
2	Magnesium Sulfate	5g/ 10ml	
1	Nitroglycerine	1 bottle 0.4mg	
5	Nitro Paste	1mg pkg	
3	Oral Glucose	15g Tube	
1	Narcan (Naloxone)	2mg/2ml	
2	Sodium Bicarb	50mEq/ 50ml	
1	Solu-Medrol	125mg/ 2ml	
1	Tranexamic Acid	1g/ 10ml	
2	Zofran (Ondansetron)	4mg dissolvable	
2	Zofran (Ondansetron)	4mg/ 2ml	
	Controlled Substances		
2	Fentanyl	100mcg/ 2ml	
2	Versed (Midazolam)	10mg/ 2ml	
2	Versed (Midazolam)	5mg/5ml	
2	Haldol (Haloperidol)	5mg/ 1ml	
1	Ketamine	500mg	
	Etomidate	40mg/ 20ml	Advanced Airway only
	Ketamine	200mg/ 20ml	Advanced Airway only
	Rocuronium	100mg/10ml	Advanced Airway only
	Succinylcholine	200mg/ 10ml	Advanced Airway only



Effective Oct 1, 2021

Equipment and Supplies

160

PAEMS EMR Equipment & Supplies

Supply	Item	Notes
2	Triangular bandages	
4	Rolls self-cling roller bandages	
3	Trauma Dressings	
2	Burn Sheets	
10	Sterile 4x4	
1	Vaseline gauze	
2 Rolls	Adhesive tape	
1	Blanket	
1	Isolation Bag	
1 ea	Box Sm, M, L gloves	
2 sets	Isolation gown kits	
2	Splinting device	
2	Adult NonRebreather	
1	Peds NonRebreather	
1	Infant Mask	
2	Nebulizer kits	
2	Adult neb masks	
2	Adult nasal cannulas	
1 ea	Adult, child, infant BVM	
1 set	OPA	
1 set	NPA 12-34f w/ lubricant	
3	Hot packs	
3	Cold packs	
1 ea	Ijel size 3,4,5 (expanded scope)	
10	Alcohol preps	
1000ml	Sterile Water	
1 ea	Adult & Child BP cuff	
1	Stethoscope	
1 ea	Long Spineboard, Blocks, Straps	
2	C Collars Adult adjustable	
1	Suction device w/ rigid tip	
1 ea	Suction catheter 6-18f	
1	AED with shaving razor	
1	Battery charger or spare battery	
2 ea	Adult AED pads	
1	Pediatric AED pads	
1	Glucometer + test strips	
1	Testing solution + Log	



Effective Oct 1, 2021

Equipment and Supplies

161

PAEMS EMT Non-Transport Equipment & Supplies

Supply	Item	Notes
2	Triangular bandages	
4	Rolls self-cling roller bandages	
3	Trauma Dressings	
2	Burn Sheets	
10	Sterile 4x4	
1	Vaseline gauze	
2 Rolls	Adhesive tape	
1	Blanket	
1	Isolation Bag	
1 ea	Box Sm, M, L gloves	
2 sets	Isolation gown kits	
2	Splinting device	
2	Adult NonRebreather	
1	Peds NonRebreather	
1	Infant Mask	
2	Nebulizer kits	
2	Adult neb masks	
2	Adult nasal cannulas	
1 ea	Adult, child, infant BVM	
1 set	OPA	
1 set	NPA 12-34f w/ lubricant	
3 ea	Hot/ Cold packs	
1	Newborn foil blanket	
1 ea	Ijel size 3,4,5 (expanded scope)	
10	Alcohol preps	
1000ml	Sterile Water	
1 ea	Lg & small CPAP	
1 ea	Adult & Child BP cuff	
1	Stethoscope	
1 ea	Long Spineboard, Blocks, Straps	
2 ea	C Collars Adult, Peds, Infant adjustable	
1	Suction device w/ rigid tip	
1 ea	Suction catheter 6-18f	
1	AED with shaving razor	
1	Battery charger or spare battery	
2 ea	Adult AED pads	
1	Pediatric AED pads	
1	Glucometer + test strips	
1	Testing solution + Log	
1	Oxygen Supply Tank/ Regulator D	

**PAEMS ILS Non Transport Supply List****In Conjunction w/ BLS Non Transport List**

	Airway Bag		IV Equipment
1	Laryngoscope handle + spare batteries	2	Saline locks
1	Extra Laryngoscope handle + batteries	5	Prefilled saline flushes
1 ea	Miller Blades 1-4	1	Cartridge syringe
1 ea	Mac Blades 1-4	5	18-25g Hypodermic needles
1 ea	Cuffed ET tubes 6.0-8.5	10	Alcohol preps
1	10ml syringe	5	IV occlusive dressings
1	Commercial ETT holder	2	10gts tubing
1	Salem Pump	2	1000ml normal saline
1 ea	Igel Size 3-4-5	10	2x2 or 4x4 gauze
1 ea	CPAP Lg/ Sm	4	Tourniquets
1	Adaptor Albuterol Nebulizer for ETT	1	Roll tape
1	Magill Forceps	2 ea	22-14g IV catheters
3	Semi Rigid pharyngeal suction tips		
1	6 or 8 suction catheter		Other Equipment
1	10 or 12 suction catheter	3	1ml syringe
1	14 or 18 suction catheter	3	3ml syringe`
1	Suction tubing	3	10ml syringe
		1	30ml syringe
XX	ILS Medications (See appropriate list)	1	60ml syringe
		2 sets	Soft restraints
		1	Needle decompression set
		1	Jamshidi IO needle
1	Cardiac Monitor/ Defibrillator w/ Capno	1 ea	25mm, 45mm IO needle
1 set	Pediatric Defib pads	2	15mm IO needle
		5	NTG papers for Nitro paste

**PAEMS BLS Transport Ambulance Equipment & Supplies**

3	Nasal cannulas	1	Wheeled Cot w/ 3 sets safety straps
2 ea	Adult & Child NonRebreather	1	Stairchair
3	Child nasal cannulas	3	Full O2 tanks (Minimum M tanks)
2	Infant masks	1	Trauma shears
1 ea	Adult, Child, Infant BVM	1ea	Adult Peds traction splint
1	Nebulizer kits	1	KED
1	Adult Nebulizer masks	2ea	Long spineboard, straps, blocks
1 set	OPA's	1	Child/ infant car seat
1 set	NPA 12-34f	1	Peds drug dosing tape or Pediwheel
5	Pkg water soluble lubricant	1	Pediatric trauma score reference
1	1,000ml suction canister	1	Poison control # displayed
3	Sterile suction tubing/ rigid tip	2 sets	Soft restraints
1ea	Sterile 6-18f soft tip suction catheter	2	Pillows
2 ea	Adult, Peds long extremity splint (SAM)	2	Pillow cases
2 ea	Adult Peds short extremity splint (SAM)	2	Sheets
6	Trauma Dressing	2	Blankets
2	Burn Sheet	4	Towels
20	Sterile 4x4	1ea	Box Lg, M, S gloves
10	Rolls self-cling gauze	1ea	Facemask per crew member
10	Alcohol Prep Pads	2 sets	Gown, goggles, face shields
1 ea	Baby, child, adult adjustable C Collar	10	Disposable surgical masks
2	Vaseline Gauze	10	PAEMS Short Forms
2	Rolls adhesive tape	5	PAEMS Refusal Forms
5	Triangular bandages	1	Sharps Container
2000ml	Sterile water		BIOHAZARD bags
1 qt	Drinking water	1	Flashlight
6ea	Hot and Cold packs	2	5# Fire Extinguisher
1	CPR mask	1	Communication Radio
1 ea	Sterile OB kit & foil blanket	1	24" Pry bar
1	AED w/ charger & razor	1	Box Zippered bags
2	Adult AED pads	1	Box facial tissue
1	Pediatric AED pads	1 ea	Lg Adult, Adult, child, infant BP Cuff
2	Emesis basins	2	Stethoscopes
1	On board suction 300mm w/in 4 seconds	1 ea	Disposable urinal & bedpan



Effective Oct 1, 2021

PAEMS Supplies

165

PAEMS BLS Ambulance Portable Supplies
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1	Full O2 Cylinder (D) w/ regulator	1	Glucometer + Battery/ Charger
1	Full Spare (D) cylinder	1	Test Strips + Testing Solution
1 ea	Adult, Child NonRebreather	10	Lancets
1 ea	Adult, Child nasal cannula	1	Glucometer Log
1 ea	Adult, Child, Infant BVM	10	Alcohol preps
1 ea	Lg, Sm CPAP	1	Salem Suction
1	Infant mask	1	Pulse Ox w/ Adult & Peds probes
2 ea	Adult nebulizer + masks	1	Portable battery powered suction
1	Pediatric Nebulizer mask	1 ea	6-18 Soft tip suction catheter
1 ea	Ijel Sizes 3-4-5	1 ea	Suction tubing w/ rigid tip
1 ea	OPA kit	5	Pkg water soluble lube
1 ea	NPA kit 12-34f		
		XX	Medications-See appropriate list

**PAEMS ILS Transport Ambulance Supply List****In Conjunction w/ BLS Transport Ambulance supply List**

	Airway Bag		IV Equipment
1	Laryngoscope handle + spare batteries	2	Saline locks
1	Extra Laryngoscope handle + batteries	5	Prefilled saline flushes
1 ea	Miller Blades 1-4	1	Cartridge syringe
1 ea	Mac Blades 1-4	5	18-25g Hypodermic needles
1 ea	Cuffed ET tubes 6.0-8.5	10	Alcohol preps
1	10ml syringe	5	IV occlusive dressings
1	Commercial ETT holder	2	10gtts tubing
1	Salem Pump	2	1000ml normal saline
1 ea	Igel Size 3-4-5	10	2x2 or 4x4 gauze
1	Adaptor Albuterol Nebulizer for ETT	4	Tourniquets
1	Magill Forceps	1	Roll tape
		2 ea	22-14g IV catheters
			Other Equipment
		2	1ml syringe
		2	3ml syringe
		2	10ml syringe
XX	ILS Medications (See appropriate list)	1	30ml syringe
		1	60ml syringe
		1	Needle decompression set
		1	Jamshidi IO needle
1	Cardiac Monitor/ Defibrillator w/ Capno	1 ea	25mm, 45mm IO needle
1 set	Pediatric Defib pads	2	15mm IO needle
		5	NTG papers for Nitro paste

**PAEMS ALS Transport Ambulance Supply List****In conjunction with PAEMS BLS Transport Ambulance Supply List**

	Airway Supplies		Other Equipment
1 ea	Magill Forceps Adult, Pediatric	2	1ml syringe
1 ea	Laryngoscope handle Adult, Peds	2	3ml syringe
1 ea	Size 1-4 Mac blades	2	10ml syringe
1 ea	Size 1-4 Miller Blades	1	30ml syringe
1 ea	6.0-8.5 cuffed ETT	1	60ml syringe
1 ea	2.5-5.5 uncuffed ETT	1	Needle decompression kit
1	Spare Laryngoscope handle w/ batteries	1	Jamshidi IO needle
1	10ml syringe	1	EZ IO drill/ box
1 ea	Commercial tube holder adult, peds	2 ea	25mm, 45mm EZ IO needle
1	Adapter ETT Albuterol admin	2	15mm EZ IO needle
1	60ml catheter tipped syringe	5	NTG papers
1 ea	Igel 4-5-6		
	Portable IV Therapy Equipment		On Board IV Therapy Equipment
2 ea	22-14g IV catheters	4 ea	22-14g IV catheters
2	Saline Locks	2	Saline Locks
5	Pre filled syringes	5	Pre filled syringes
1	Cartridge Syringe	1	Cartridge Syringe
5	18-25g Hypodermic Needles	5	18-25g Hypodermic Needles
10	Alcohol Preps	10	Alcohol Preps
5	Occlusive dressings	10	Occlusive dressings
2	10gtts tubing	4	10gtts tubing
2	1000ml 0.9 normal saline	4	1000ml 0.9 normal saline
1	250ml 0.9 normal saline	1	250ml 0.9 normal saline
1	60gtts tubing	1	60gtts tubing
10	2x2 or 4x4 gauze	10	2x2 or 4x4 gauze
4	Tourniquets		
1	Roll tape		
			Monitoring Equipment
		1	Cardiac Monitor w/ 12 lead, Capno, Printing Pacing, Cardioverting capabilities