# *Galesburg Cottage EMS System*


## *Prehospital Care Manual*

***2018 Version***

**GALESBURG COTTAGE EMS SYSTEM**
**PREHOSPITAL CARE MANUAL**

## FOREWORD

*The Prehospital Care Manual* has become the focal point for patient care for EMS System providers in the Prehospital setting.

The intent of this manual is to create a *team approach* to Prehospital care, resulting in optimum patient care that is both efficient and effective. The focus of this manual is on providing safe, well-planned care for the patients we serve as well as maintaining a safe environment for the Prehospital care provider. This manual is also meant to be used as a study guide and helpful reference when necessary.

***All information contained herein is intended for use within the 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 EMS System without the approval of the EMS System Medical Director.***

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## *From the EMS Medical Director*

The mission of the 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 the EMS Office 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 EMS System is both enjoyable and rewarding for you.

Respectfully,

Thomas Singel, MD
EMS Medical Director

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# Hospitals of the System

***Resource Hospital*** — ***Services***

**Galesburg Cottage Hospital**
**695 N. Kellogg St.**
**Galesburg, Illinois 61401**
Medical Center 309-343-8131
Medical Control 309-343-2419
Emergency Department 309-345-4223

***Comprehensive Medical Center***
***EMS Medical Control***
***Pediatric Services***

***Associate Hospitals*** — ***Services***

**OSF St. Mary Medical Center**
**3333 N. Seminary St.**
**Galesburg, Illinois 61401**
Medical Center 309-344-3161
Emergency Department 309-344-9403
Telemetry Line 309-343-3832

***Comprehensive Medical Center***
***Pediatric Services***

***Participating Hospital*** — ***Services***

**OSF Holy Family Medical Center**
**1000 W. Harlem**
**Monmouth, Illinois 61462**
Hospital Services 309-734-3141

***Rural Access Hospital***

# Levels of Prehospital Care
## *EMS Services*

**First Responder Services** defines a preliminary level of Prehospital emergency care as outlined in the First Responder National Curriculum of the National Highway Transportation Safety Administration and any modification to that curriculum specified in rules adopted by IDPH pursuant to the EMS Act. First Responder care includes: ***CPR, AED services, monitoring vital signs, administration of certain medications, administration of oxygen and bleeding control.***

**Basic Life Support (BLS) Services** defines a level of Prehospital and inter-hospital medical services as outlined in the Basic Life Support National Curriculum of the National Highway Transportation Safety Administration and any modification to that curriculum specified in rules adopted by IDPH pursuant to the EMS Act. BLS emergency and non-emergency care includes: ***basic airway management, CPR, AED services, control of shock & bleeding and splinting of fractures.*** BLS services may be enhanced with the administration of System-approved medications.

**Intermediate Life Support (ILS) Services** defines a level of Prehospital and inter-hospital medical services as outlined in the Intermediate Life Support National Curriculum of the National Highway Transportation Safety Administration and any modifications to that curriculum specified in rules adopted by IDPH pursuant to the EMS Act. ILS emergency and non-emergency care includes: ***basic life support care, intravenous fluid therapy, oral intubation, EKG interpretation, 12-lead acquisition, defibrillation procedures and administration of System-approved medications.***

**Advanced Life Support (ALS) Services** defines a level of Prehospital and inter-hospital medical services as outlined in the Paramedic Life Support National Curriculum of the National Highway Transportation Safety Administration and any modifications to that curriculum specified in the EMS Act. ALS emergency and non-emergency care includes: ***basic and intermediate life support care, ACLS electrocardiography and resuscitation techniques, administration of medications, drugs & solutions, use of adjunctive medical devices, CPAP, chest decompression and intraosseous access.***

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# Levels of Prehospital Care
## *Prehospital Personnel*

1. A currently licensed First Responder, EMR, EMT-B, EMT-I, EMT-P 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 the Department (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-B, EMT-I or EMT-P may only use their EMT license in Prehospital/inter-hospital emergency care settings or non-emergency medical transport situations under the written directions of the EMS Medical Director.

3. **First Responder/EMR:** Provides care consistent with the definition of a First Responder/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.

   Medical Control must be contacted regarding certain medication administration.

# Levels of Prehospital Care
## *Prehospital Personnel*

4. **Emergency Medical Technician – Basic (EMT-B):** 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/maintenance, ventilatory support, oxygen delivery, bleeding control, spinal immobilization and splinting isolated fractures.

   EMT-B attention is directed at conducting a thorough patient assessment, providing appropriate care and preparing or providing patient transportation. Medical Control must be contacted regarding certain medication administration.

   AEDs are required on BLS vehicles officially incorporated into the EMS System Plan.

5. **Emergency Medical Technician – Intermediate (EMT-I):** Provides care consistent with the definition of an ILS service and within the context of SMOs or SOPs. This may include all BLS skills, along with intravenous fluid therapy, oral intubation, EKG interpretation, 12-lead acquisition, defibrillation procedures and administration of system-approved medications. EMT-I attention is directed at conducting a thorough patient assessment, providing appropriate care and preparing or providing patient transportation.

6. **Emergency Medical Technician – 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, advanced EKG skills with prompt intervention using Advanced Cardiac Life Support (ACLS), administration of System-approved medications & IV solutions, proper use of System-approved adjunctive medical devices and performance of advanced medical procedures (e.g. needle chest decompression and intraosseous access). 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 EMT-P 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".

# Provider Responsibilities

# Provider Status

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# Agency Responsibilities Policy

Listed below is a summary of the important responsibilities of the provider agencies that are in the EMS System. This list is based on the System manuals and IDPH rules and regulations. These responsibilities are categorized into four major areas: ***Operational Requirements, Notification Requirements, Training & Education Requirements*** and ***Additional Reports and Records Requirements***. Some items have been repeated to stress the importance of compliance.

## Operational Responsibilities

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(g) of the EMS Act.

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 of the EMS Act).

3. Agencies that utilize First Responders and Emergency Medical Dispatchers shall cooperate with the System and the Department in developing and implementing the program (Section 515.170 of the EMS Act).

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***.

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.

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# Agency Responsibilities Policy

## Notification Requirements

An agency participating as an EMS provider in the EMS System must notify the Resource Hospital, Galesburg Cottage Hospital, 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 as well as submitting a yearly roster indicating current members. Rosters must include: *Name/level of provider, license number, expiration date, current address, phone number, date of birth, and B-med certification status.*

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 within 24 hours, which could or did adversely affect the patient, co-worker or the System.

5. Provide the EMS Office with updated copies of FCC Licenses and Mutual Aid Agreements upon expiration.

6. Notify the System of any changes in medical equipment or supplies.

7. Notify the System of any changes in vehicles. Vehicles must be inspected by the System& IDPH and the appropriate paperwork must be completed *prior* to the vehicle being placed into service.

8. Notify the System if the agency's role changes in providing EMS.

# Agency Responsibilities Policy

## Notification Requirements (continued)

**9.** Notify the System if the agency's response area changes.

**10.** Notify the System if changes occur in communication capacities or equipment.

## Training and Education Responsibilities

**1.** Twenty-five percent (25%) of all EMT continuing education must be obtained through classes taught / sponsored / approved by the Resource Hospital, Galesburg Cottage Hospital

**2.** Appoint a training officer. The EMS training officer should be an IDPH Lead Instructor, if possible.

**3.** 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*.

**4.** 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.

**5.** Any changes made to an approved training application must be communicated to the EMS Office prior to the training.

**6.** Maintain sign-in rosters for all training conducted and provide participants with certification of attendance.

**7.** Conduct System mandatory training annually as per EMS Office notification.

# Agency Responsibilities Policy

## Additional Reports and Records Responsibilities

1. Comply with the EMS System Quality Assurance Plan, including agency self-review, submission of incident reports and submission of patient care reports.

2. Maintain controlled substance security logs and usage tracking forms. Logs must be made available upon request of EMS Office personnel.

3. Maintain glucometer logs. *Testing should be done a minimum of once per week, any time a new bottle of strips is put into service and any time the glucometer is dropped.* Glucometer logs should be kept in the ambulance (or other vehicle) and must be made available upon request of EMS Office personnel.

4. All agencies and agency personnel are to comply with all of the requirements outlined in HIPAA regulations with regard to protected health information.

5. All EMS System personnel and ambulances are responsible for and shall maintain their certifications, licenses and approvals. (Section 515.390)..

6. All System personnel are responsible for maintaining their own continuing education records, and sending copies to the EMS office 60 days before expiration of the current license.

# Professional Conduct & Code of Ethics Policy

*The following are guidelines for EMT interaction with patients, other caregivers and the community:*

- **Respect for Human Dignity** – Respect all patients regardless of socio-economic status, financial status or background. Dignity includes greeting, conversing, respectful mannerisms, and protecting physical privacy.

- **Maintain Confidentiality** – 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.

- **Professional Competency** – Provide the patient with the best possible care by continuously improving your 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.

- **Safety Awareness & Practice** – Protect the health and well-being of the patient, yourself, your co-workers and the community by constantly following safety guidelines, principles and practices.

- **Accountability for Your Actions** – Act within your training, know your limitations, and accept responsibility for both satisfactory and unsatisfactory actions.

- **Loyalty & Cooperation** – Demonstrate devotion by maintaining confidentiality, assisting in improving morale and not publicly criticizing.

- **Personal Conduct** – 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.

# Professional Conduct & Code of Ethics Policy

## EMT Code of Ethics

(Applies to ALL Prehospital providers)

Professional status as a First Responder/Emergency Medical Technician is maintained and enriched by the willingness of the individual practitioner to accept and fulfill obligations to society, other medical professionals, and the profession of Emergency Medical Technician.

As a First Responder/Emergency Medical Technician, I solemnly pledge myself to the following code of professional ethics:

- A fundamental responsibility of the FR/EMT 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.
- The FR/EMT provides services based on human need, with respect for human dignity, unrestricted by consideration of nationality, race, creed, color or status.
- The FR/EMT does not use professional knowledge and skills in any enterprise detrimental to the public well-being.
- The FR/EMT respects and holds in confidence all information of a confidential nature obtained in the course of professional work unless required by law to divulge such information.
- The FR/EMT, as a citizen, understands and upholds the law and performs the duties of citizenship; as a professional, the EMT has the never-ending responsibility to work with concerned citizens and other healthcare professionals in promoting a high standard of emergency medical care to all people.
- The FR/EMT shall maintain professional competence and demonstrate concern for the competence of other members of the EMS healthcare team.
- A FR/EMT assumes responsibility in defining and upholding standards of professional practice and education.

# Professional Conduct & Code of Ethics Policy

## EMT Code of Ethics (continued)

- The FR/EMT assumes responsibility for individual professional actions and judgment, both in all aspects of emergency functions, and knows and upholds the laws which affect the practice of the EMT.
- A FR/EMT has the responsibility to be aware of and participate in matters of legislation affecting the EMS System.
- The FR/EMT, or groups of FR's/EMTs, who advertise professional service, does so in conformity with the dignity of the profession.
- The FR/EMT has an obligation to protect the public by not delegating to a person less qualified, any service which requires the professional competence of an FR/EMT.
- The FR/EMT will work harmoniously with and sustain confidence in FR/EMT associates, the nurses, the physicians, and other members of the EMS healthcare team.
- The FR/EMT refuses to participate in unethical procedures and assumes responsibility to expose incompetence or unethical conduct of others to the appropriate authority in a proper and professional manner.

# Agency Compliance Waiver Policy

If compliance with IDPH Rules and Regulations of the EMS System Policies results in unreasonable hardship, the EMS provider agency shall petition the System and IDPH for a temporary rule waiver.

The format for waiver petition shall be as follows:

**Part 1** 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*.

**Part 2** Explanation of why the waiver is necessary.

**Part 3** Explanation of how the modification will relieve problems that would be created by compliance with the rule or policy as written.

**Part 4** Statement of and justification for the time period (maximum three years) of which the modification will be necessary. This section must also include a chronological plan for meeting total compliance requirements.

a) Submit a copy of 30-day staffing schedule.

# Agency Compliance Waiver Policy Cont'd

The petition should be submitted to the 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. **Waivers will be granted only if there is NO reduction in the standard of medical care.**

# Agency Advertising Policy

EMS agencies are expected to advertise in a responsible manner and in accordance with applicable legislation to assure the public is protected against misrepresentation.

**No agency** (public or private) shall advertise or identify their vehicle or agency as an EMS life support provider unless the agency does, in fact, provide service as defined in the EMS Act and has been approved by IDPH.

**No agency** (public or private) shall disseminate information leading the public to believe that the agency provides EMS life support services unless the agency does, in fact, provide services 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, is guilty of a Class C misdemeanor.

**A licensee** that advertises its service as operating a specific number of vehicles or more than one vehicle shall state in such advertisement the hours of operation for those vehicles, if individual vehicles are not available twenty-four (24) hours a day. Any advertised vehicle for which hours of operation are not stated shall be required to operate twenty-four (24) hours a day.

It is the responsibility of all EMS System personnel to report such infractions of this section to the EMS Medical Director.

# System Certification Policy

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.

## System Certification Process

***1.*** A System applicant must hold a State of Illinois license or be eligible for State licensure. EMS providers transferring in from another system or state must have all clinical and internship requirements completed prior to System certification. *Transferring into the EMS System to complete internship requirements of an EMT training program is prohibited.*

***2.*** The System applicant must be a member of or in the process of applying for employment with a EMS System provider agency. The System agency must inform the EMS Office of the applicant's potential for hire or membership to their agency.

***3.*** A *Pre-Certification Application* must be completed and submitted to the EMS Office.

***4.*** The System applicant must also submit copies of the following:

- IDPH license (FR, EMT, Intermediate, Paramedic, or PHRN)
- National Registry certification (if applicable)
- ACLS (Intermediate, Paramedic)
- PHTLS, ITLS or system approved equivalent (Intermediate, Paramedic)
- PEPP or PALS or system approved equivalent (Intermediate, Paramedic)
- CPR [AHA Healthcare Provider] (FR, EMT, Intermediate, Paramedic or PHRN)
- Letter of reference from current EMS Medical Director
- Resume´ (education, employment and references)

***5.*** Upon System review of the *Pre-Certification Application*, EMS Office personnel will conduct a pre-interview with qualified applicants.

# System Certification Policy

## System Certification Process (continued)

***6.*** The System applicant must pass the appropriate EMS System Protocol Exam with a score of **75% or higher**. The applicant may retake the exam with the approval of the EMS Medical Director. A maximum of two (2) retakes are permitted.

***7.*** Successfully complete any practical skills evaluations required by the EMS Medical Director.

***8.*** Upon successful completion of the above requirements, the System applicant must meet with the EMS Medical Director for final approval. Once approval is granted, the applicant will receive a letter of System certification.

***9.*** Satisfactory completion of a **90-day** probationary period is required once System-certification is granted.

***10.*** 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.

# System Certification Policy

## Maintaining System Certification

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

| | |
|---|---|
| **First Responder (FR)**<br>**Emergency Medical Responder**<br>**(EMR)** | *Current* AHA Healthcare Provider |
| **EMT-Basic (EMT-B)** | *Current* AHA Healthcare Provider |
| **EMT-Intermediate**<br>**(EMT-I)** | *Current* AHA Healthcare Provider<br><br>PHTLS, ITLS or system approved equivalent (Intermediate, Paramedic)<br><br>PEPP, PALS or system approved equivalent (Intermediate, Paramedic)<br><br>ACLS<br><br>Active member of EMS System ILS or ALS agency<br><br>Successfully complete periodic System protocol testing and skills evaluation |

# System Certification Policy

## Maintaining System Certification

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|---|---|
| **EMT-Paramedic (EMT-P)** | Current AHA Healthcare Provider<br><br>PHTLS, ITLS or system approved equivalent (Intermediate, Paramedic)<br><br>PEPP, PALS or system approved equivalent (Intermediate, Paramedic)<br><br>ACLS<br><br>Active member of EMS System ALS agency<br><br>Successfully complete periodic System protocol testing and skills evaluation |
| **Prehospital RN (PHRN)** | *Current* AHA Healthcare Provider<br><br>PHTLS, ITLS or system approved equivalent (Intermediate, Paramedic)<br><br>PEPP, PALS or system approved equivalent (Intermediate, Paramedic)<br><br>ACLS<br><br>Active member of EMS System agency<br><br>Successfully complete periodic System protocol testing and skills evaluation |

# System Certification Policy

## Maintaining System Certification

**NOTE:** Effective **07/07/rev.08/17**for *EMT-I, EMT-P & PHRN* in the EMS System:

- Failure to maintain *current* certification in ACLS, BTLS/PHTLS, PEPP/PALS, CPR or any other System certification will result in **immediate suspension** of the individual in violation. The individual will be required to take a full provider course in the lapsed certification and will NOT be allowed to simply take a refresher course for certification. The individual will remain on suspension until proof of current certification is presented to the EMS Office. FR & EMT-B must be current in CPR.

- Maintaining of current certifications and tracking of expiration dates is ultimately the responsibility of the individual provider. Agency training officers will be *assisting* with monitoring these certifications and reporting to the EMS Office. However, these individuals are not *responsible* for any certifications other than their own.

- Any provider who continues to function with a suspended license will be **immediately terminated** from the EMS System.

## System Resignation / Termination

A System participant may resign from the System by submitting a written resignation to the EMS Medical Director.

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. If the participant does not do this within the 60-day time period, then the individual's System certification will be re-categorized or terminated.

An EMS provider requesting to re-certify in the EMS System will be required to repeat the process for initial certification.

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# System Certification Policy

## Provider Status

**Active Provider –** An EMT is considered an active provider if he/she:

- Is System-certified at the level of his/her IDPH licensure level.
- Is active and functions at his/her certification level with a System agency providing the same level of service.
- Maintains all continuing education requirements, System certifications, and System testing requirements in accordance with System policy for his/her level of System certification.

**Sub-certified Provider –** An EMT is considered to be a sub-certified provider if he/she:

- Is System-certified at a level other than his/her IDPH licensure level.
- Is active and functions as a provider with a System agency at a level of service other than his/her IDPH licensure level.
- Maintains all continuing education requirements, System certifications, and System 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 theindividual 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 System agency (this includes uniform patches and name tags).
    - A sub-certified provider shall apply for *independent* re-licensure.

# System Certification Policy

## Provider Status

**Inactive (Non-participating) Provider –** An EMT is considered to be inactive if he/she:

- Was System-certified but has not functioned with a System agency for > 60 days.
- Maintains IDPH continuing education requirements.
- RESTRICTIONS:
    - An inactive provider is **prohibited** from identifying himself/herself as an EMS provider in the EMS System.
    - An inactive provider is **prohibited** from performing skills or providing care that he/she is not System-certified to perform.
    - An inactive provider must apply for independent re-licensure with an IDPH Regional Coordinator.

## System Affiliation

Service Providers who are members in good standing in one of the Galesburg EMS Systems, may transition into the other Galesburg EMS System and be exempt from the initial requirements of the System Certification Policy.

# Re-Licensure Requirements Policy

## Re-Licensure Process

1. To be re-licensed as an EMS provider, the licensee shall 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 continuing education requirements and/or failure to submit the appropriate documentation to the EMS Office at least 60 days prior to the license expiration date may result in delay or denial of re-licensure. **The licensee will be responsible for any late feesor class fees incurred as a result.**

2. The EMS Office will review the re-licensure applicant's continuing education records. If the individual has met all requirements for re-licensure and approval is given by the EMS Medical Director, the EMS Office will submit a renewal request to IDPH.

3. 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. The EMS Office will assist the licensee in securing the appropriate renewal form.

4. IDPH requires the licensee to certify on the renewal application form (Child Support Statement), **under penalty of perjury**, that he or she is not more than 30 days delinquent in complying with a child support order. IDPH also requires the applicant to provide their social security number and driver's license number. (Section 10-65(c) of the Illinois Administrative Procedure Act [5 ILCS 100/10-65(c)]).

5. 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 EMS System until a copy of a *current* license is on file in the EMSOffice.

6. An EMS provider whose license has expired may, **within 60 days after license expiration**, submit all re-licensure material and a fee of $50.00 in the form of a *certified check* or *money order* made payable to IDPH (Note: Personal checks, cash or credit cards will NOT be accepted). If all continuing education and System requirements have been met and there is no disciplinary action pending against the EMS provider, the Department may re-license the EMS provider.

# Re-Licensure Requirements Policy

## Re-Licensure Process (Continued)

7. Any EMS provider whose license has expired for a period of more than **90 days** but less than 1095 consecutive days (36 months) shall be required to follow the policy outlined in the "Reinstatement Policy" (page 39

   **Note: Failure to re-license at any level does not "automatically" drop a provider to a lower level of certification (e.g. An EMT does not automatically become a First Responder, etc.). Once a provider's license has expired, he or she is no longer an EMS provider at ANY level and cannot provide medical care in the System or the State.

8. Requests for extensions or inactive status must be submitted on the proper IDPH form and forwarded to the EMS Office at least 60 days prior to expiration. Extensions are granted only in very limited circumstances and are handled on a case by case basis.

   NOTE: The EMS Medical Director may mandate additional CEU requirements during the extension period.

9. At any time prior to the expiration of the current license, an EMT-I or EMT-P may revert to the EMT-B status for the remainder of the license period. The EMT-I or EMT-P must make this request in writing to the EMS Medical Director & the Department and must submit their original **current** EMT-I or EMT-P license to the Department. To re-license at the EMT-B level, the provider must meet all of the EMT-B requirements for re-licensure.

10. At any time prior to the expiration of the current license, an EMT-B may revert to the First Responder/Defibrillator (FR) status for the remainder of the license period. The EMT-B must make this request in writing to the EMS Medical Director & the Department and must submit their original **current** EMT-B license to the Department. To re-license at the FR- level, the provider must meet all of the FR requirements for re-licensure.

# Re-Licensure Requirements Policy

## General Continuing Education Requirements

In conjunction with the Region 2 EMS/Trauma Plan, the EMS System requires:

1. Twenty-five percent (25%) of the didactic continuing education hours required for re-licensure (as an EMS provider, at any level in the System) must be earned through attendance at System-taught courses, courses sponsored by the EMS Office at the Resource Hospital, Galesburg Cottage Hospital or courses taught by a System-approved instructor.

2. No more than ninety percent (90%) of the continuing education hours required for re-licensure will consist of hours obtained from the same site code.

3. No more than twenty-five percent (25%) of the continuing education hours required for re-licensure will consist of any single subject area (i.e. shock, diabetic emergencies, etc.).

4. EMS providers (all levels) must attend at least one (1) continuing education program that reviews EMS System and Regional Policies, Standing Medical Orders and Operating Procedures as part of the four-year, 25% EMS System continuing education requirements.

5. EMS continuing education credits must have an *approved* IDPH site code.

6. Continuing education credits approved for EMS Systems within IDPH EMS Region 2 will be accepted by the EMS System.

7. Prior approval must be obtained from the EMS Medical Director for continuing education programs from other IDPH regions or from other states, including national symposiums.

# Re-Licensure Requirements Policy

## Summary of Re-licensure Requirements

| | |
|---|---|
| **Emergency Medical Dispatcher (EMD)** | IDPH has no specific continuing education requirements for dispatchers. However, the dispatch certification-training program recognized by the local Emergency Telephone System Board (ETSB) may have specific requirements for re-certification. Dispatch personnel should consult the local ETSB for re-certification. Dispatch personnel should consult the local ETSB for specific guidelines. |
| **First Responder (FR)** | A minimum of twenty-four (24) hours of continuing education that review the core First Responder curriculum and includes review of EMS System protocols<br><br>Current CPR/AED certification American Heart Association (AHA) Healthcare Provider<br><br>Functioning within a “State approved EMS System providing the licensed level of life support services as verified by the EMS System Medical Director” |

# Re-Licensure Requirements Policy

## Summary of Re-licensure Requirements

| | |
|---|---|
| **EMT-Basic (EMT-B)** | Sixty hours of Continuing education.<br><br>Current CPR/AED certification {AHA Healthcare Provider<br><br>Functioning with a "State approved EMS System providing the licensed level of life support services as verified by the GCH EMS System Medical Director"<br><br>Must meet EMS System certification (provider status) requirements to be recommended for re-licensure by the EMS Medical Director |

**GALESBURG COTTAGE EMS SYSTEM**
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# Re-Licensure Requirements Policy

## Summary of Re-licensure Requirements

| | |
|---|---|
| **EMT-Intermediate (EMT-I)** | Eighty [80] hours Continuing Education.<br><br>Current CPR/AED certification AHA Healthcare Provider<br><br>Current certification in ITLS or Prehospital Trauma Life Support (PHTLS) or system equivalent.<br><br>Current certification in Pediatric Education for Prehospital Providers (PEPP) or PALS or system equivalent<br><br>Functioning with a "State approved EMS System providing the licensed level of life support services as verified by the EMS System Medical Director"<br><br>Must meet EMS System certification (provider status) requirements to be recommended for re-licensure by the EMS Medical Director |

# Re-Licensure Requirements Policy

## Summary of Re-licensure Requirements

| | |
|---|---|
| **EMT-Paramedic (EMT-P)** | A minimum of one hundred (100) hours of continuing education.<br><br>Current CPR AHA Healthcare Provider.<br><br>Current certification in Prehospital Trauma Life Support (PHTLS), ITLS or system equivalent.<br><br>Current certification in ACLS<br><br>Current certification in Pediatric Education for Prehospital Providers (PEPP) or Pediatric Advanced Life Support (PALS) or system equivalent.<br><br>Functioning with a "State approved EMS System providing the licensed level of life support services as verified by the EMS System Medical Director"<br><br>Must meet EMS System certification (provider status) requirements to be recommended for re-licensure by the EMS Medical Director |

# Re-Licensure Requirements Policy

## Summary of Re-licensure Requirements

**Prehospital RN (PHRN)**

A minimum of one hundred (100) hours of continuing education.

Current CPR certification AHA Healthcare Provider.

Current certification in ITLS or Prehospital Trauma Life Support (PHTLS) or system equivalent.

Current certification in Advanced Cardiac Life Support (ACLS).

Current certification in Pediatric Education for Prehospital Providers (PEPP) or Pediatric Advanced Life Support (PALS) or system equivalent.

Functioning with a “State approved EMS System providing the licensed level of life support services as verified by the EMS System Medical Director”

**GALESBURG COTTAGE EMS SYSTEM**
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# Reinstatement Policy

I. Purpose

This policy outlines the steps necessary for reinstating the license of an Emergency Medical (EMS) individual who has failed to comply with the renewal licensing requirements or who voluntarily surrendered their license within the last 36 consecutive months (section 515.640, IL EMS & Trauma Center Code).

II. Guidelines

EMS individuals requesting reinstatement must meet the following requirements.

A. A letter from the individual requesting reinstatement addressed to the system Medical Director and IDPH asking for reinstatement under section 515.640.

B. The applicant shall submit a positive recommendation, in writing, from the EMS Medical Director attesting to the applicant's clinical qualifications for retesting. The EMS Medical Director shall verify that the applicant has demonstrated competency of all skills at the level of EMT licensure sought to be reinstated.

C. Provide a copy of a current CPR card and, if applicable, copies of current ITLS or PHTLS, ACLS and PALS or PEPP.

D. Copies of continuing education records from the previous 48 consecutive months which need to meet the state requirements for each respective providers level of licensure.

E. All levels of EMS individuals who have not practiced clinically within the System for greater than 6 months shall be required to complete the written and practical testing requirements outlined in the "System Certification Policy" (items 6 & 7).

F. The applicant shall pass a Department-approved test for the level of EMT license sought to be reinstated. The applicant must be "approved" by the Department prior to being allowed to sit for the exam.

G. A "reinstatement" fee as prescribed by the Department in addition to any testing fees that may be required.

# EMS
# Communications & Documentation

# Off-Line Medical Control, Standing Medical Orders & Protocols Policy

The Prehospital Care Manual, developed by the EMS Medical Director and approved by IDPH, reflects nationally recommended treatment modalities for providing patient care in the Prehospital setting. This Prehospital Care Manual, containing Standing Medical Orders, Protocols, Policies & Procedures, is intended to establish the standard of care which is expected of the EMS System provider.

**1.** Standing Medical Orders, Protocols, Policies & Procedures contained in this Prehospital Care Manual are the written, established standard of care to be followed by all members of the EMS System for treatment of the acutely ill or injured patient.

**2.** The EMS provider will initiate patient care under these guidelines and contact Base Station Medical Control in a timely manner for those treatments, which require on-line physician's order. Diligent effort must be made to contact Medical Control in a timely manner via cellular telemetry, landline phone or VHF MERCI radio. Delay or failure to contact Medical Control for required on-line orders is a quality assurance indicator.

**3.** These Standing Medical Orders will be utilized as Off-Line Medical Control under the following circumstances:

- In the event communication cannot be established or is disrupted between the Prehospital provider and Medical Control (or the receiving hospital).
- In the event that establishing communications would cause an inadvisable delay in care that would increase life threat to the patient.
- In the event the Medical Control physician is not immediately available for communication.
- In the event of a disaster situation, where an immediate action to preserve and save lives supersedes the need to communicate with hospital-based personnel, or where such communication is not required by the disaster protocol.

**4.** Inability to contact Medical Control should not delay patient transport or the provision of life-saving therapies. Patient destination and transport decisions are set forth in these Standing Medical Orders/Protocols.

# On-Line Medical Control Policy

## On-Line Medical Control

Base Station Medical Control is designed to provide immediate medical direction and consultation to the Prehospital EMS provider in accordance with established patient treatment guidelines.

On-line Medical Control is utilized to involve the expertise of an Emergency Medical Physician in the treatment plans and decisions involving patient care in the Prehospital setting.

1. Voice communications shall be categorized as "**MERCI**" for calls that do not require medical orders and "**Telemetry**" for *medical or trauma calls* requiring medical orders or base station physician contact and/or consultation.

2. EMS communications requiring on-line contact with a base station physician shall be conducted using cellular telemetry (309) 343-2419.

3. Use of **telemetry** is required for patient care requiring interventions beyond the *Routine ALS, ILS or BLS* standing medical orders. Situations requiring Medical Control contact include, but are not limited to:

    - Anytime an order is required for BLS, ILS or ALS medications.
    - Anytime orders are needed for *procedures*.
    - Any instance an EMS provider desires *physician involvement*.

# On-Line Medical Control Policy

## On-Line Medical Control (Continued)

- Circumstances involving a Death at Scene (**DAS**) or cases involving advanced directives (**DNR** et al).
- **High-risk refusals** (*see next page*).
- *First Responder* **low risk refusals** (*see item #10 of this policy*).
- Use of **restraints** (including handcuffs).
- **Trauma** cases or **potential trauma cases** (based on mechanism of injury).

4. **"Telemetry" calls** include all medical complaints requiring Medical Control contact, refusals and traumas.

5. **"Trauma Traffic"** includes calls that are related to injuries or mechanisms of injury that meet (or potentially meet) *Minimum Trauma Field Triage Criteria* (see *Critical Trauma Procedure*). Trauma traffic **does not include refusals** (including accident refusals).

6. **"MERCI" calls** are made via MERCI radio and called directly to the receiving hospital (or in cases where telemetry communication is not possible and consult with a physician is necessary). MERCI communication is adequate for patient care that does not require interventions beyond *Routine BLS, ILS or ALS Care*. Specifically, patients that have received only Oxygen, monitor, IV and/or medications without the need for additional orders or in cases where Medical Control contact is not required.

# On-Line Medical Control Policy

## On-Line Medical Control (Continued)

- If the receiving hospital deems that further care is necessary or requests additional interventions be performed, the EMS provider should contact Medical Control.

- If the receiving hospital requests discontinuation of treatment established by the Prehospital provider, Medical Control contact should be established.

7. **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
- Significant mechanism of injury (e.g. rollover MVA)
- Altered level of consciousness or impaired judgment
- Minors (17 years old or younger, regardless of injury)

8. **Low Risk Refusals** do not require Medical Control consultation 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.
**[First Responders see item# 10 of this policy]**

# On-Line Medical Control Policy

## On-Line Medical Control (Continued)

**Low risk refusals** may include:

- Slow speed auto accidents *without* injury
- Isolated injuries not related to an auto accident or other significant mechanism of injury
    - Lifting assistance or "public assist" calls (for which EMS is called for assistance in moving a patient from chair to bed, floor to bed, car to home, etc.) **do not require a refusal form**.
    - This assumes the EMS Agency is routinely called to assist this patient; the patient is assessed to ensure there is no complaint or injury and there has been no significant change in the patient's condition.
    - A patient care report must be completed indicating any assessment findings and assistance rendered.

9. **If the EMS provider has not been able to contact Medical Control** via cellular telemetry, telephone or MERCI radio, the EMS provider will 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 radio/communications failure and initiation of the EMS System *Standing Medical Orders and Standard Operating Procedures*.

10. First Responders may handle **low risk** refusals only (as defined above). However, First Responders must contact Medical Control via cellular telemetry at (309) 343- 2419. **Under no circumstance should a First Responder take a *high risk* refusal**.

# Radio Communications Protocol

Radio communications is 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. Therefore, **a complete patient assessment and set of vital signs should be completed prior to contacting Medical Control or the receiving hospital.**

Regardless of the destination, **early** and **timely** notification of Medical Control or the receiving hospital is essential for prompt care to be delivered by all involved.

## Components of the Patient Report

- 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
- SAMPLE History
- Treatment rendered and patient response to treatment

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

1. Cellular telemetry (309) 343-2419
2. MERCI radio

If unable to establish contact with Cottage, attempt to contact St. Mary's Telemetry Line at 309-343-3832. If still unable to establish contact, then initiate protocol. If Medical Control contact is <u>not</u> necessary, contact the receiving hospital via MERCI.

# Patient Right of Refusal Policy

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 copy of a Durable Power of Attorney for Healthcare.***

## Refusal Process

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.

3. Secure Medical Control approval of **high risk refusals** (low risk refusals for First 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 present, 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.

# Patient Right of Refusal Policy

## Refusal Process (continued)

**7.** The original *AMA/Refusal Form* shall be retained by the agency securing the refusal.

# Incident Reporting Policy

Prehospital care providers shall complete an EMS System (or the individual agency) *Incident Report Form* whenever a System related issue occurs. In order to properly assess the situation and determine a solution to the issue, 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

## Incident Report Process

1. All incident report forms shall be given to the EMS provider's immediate supervisor, training officer, or quality assurance coordinator who will assess the incident and will forward the report to the EMS System Coordinator.

2. The EMS 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.

## Incident Report Indicators

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 EMS System policies, procedures or protocols.

# Incident Reporting Policy

## Incident Report Indicators (continued)

- **Medication errors**
- **Treatment errors**
- Delays in patient care or scene response
- Operating on protocol when Medical Control contact was indicated but unavailable
- Violence toward EMS providers that results in injury or prevents the provider from delivering appropriate patient care
- Equipment failure (e.g. cardiac monitor, glucometer)
- 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
- Conflicts between agencies (that do not impact patient care)
- Operational errors (that do not impact patient care)
- Behavioral issues (that do not impact patient care)

# EMS Patient Care Reports Policy

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. **It is imperative that written documentation is left with the patient at the receiving facility**.

## Patient Care Reports

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. Ideally, a patient care report will be completed in its entirety and provided to the receiving hospital's Emergency Department immediately after transferring care to the ED staff and **prior to** departing the hospital.

3. If the patient care report cannot be completed prior to departing the ED, then an 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.

4. Documentation must be completed on System approved forms and/or System approved electronic reporting systems.

5. 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.

# Patient Confidentiality & Release of Information Policy

All EMS System personnel are exposed to or engaged in the collection, handling, documentation or distribution of patient information. Therefore, all EMS personnel are responsible for the protection of this information.

Unnecessary sharing of confidential information will not be tolerated. EMS System personnel must understand that breach of confidentiality is a serious infraction and violation of HIPAA with legal implications. Corrective action will be taken including System suspension or termination.

## Confidential Information Guidelines

1. **Written and Electronic Documentation**

   **a)** Confidentiality is governed by the "*need to know*" concept.

   **b)** Only 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.

   **c)** Requests for release of patient care related information (from third party payers, law enforcement personnel, the coroner, fire department or other agencies) should be directed to the EMS agency's medical records department.

2. **Verbal Reports**

   **a)** EMS System personnel are **not** to discuss specific patients in public areas.

   **b)** EMS providers should not discuss any confidential information regarding patient care with friends and relatives or friends and relatives of the patient. This includes hospitalization of a patient and/or the patient's condition.

# Patient Confidentiality & Release of Information Policy

## Confidential Information Guidelines (continued)

**c)** Information gained from chart or case reviews is considered confidential.

### 3. Radio Communications

**a)** No patient name will be mentioned in the process of Prehospital radio transmissions utilizing MERCI radio.

**b)** When calling in a "direct admit", if patient information is needed, it will be done via telemetry/cellular line. The patient's initials should not be given over MERCI radio.

**c)** Sensitive patient information regarding diagnosis or prognosis should not be discussed during radio transmissions.

### 4. Communication at the Scene

**a)** Every effort should be made to maintain the patient's auditory and visual privacy during treatment at the scene and en route.

**b)** EMS personnel should limit bystanders at the scene of an emergency. Law enforcement personnel may be called upon to assist in maintaining bystanders at a reasonable distance.

# GENERAL PATIENT ASSESMENT & MANAGEMENT

# EMS OPERATIONS

# Patient Assessment Process & Goals of Patient Care

The goal of the patient assessment process is to measure the status of the patient's perfusion, identify life-threatening conditions, determine the patient's chief complaint and/or mechanism of injury, evaluate the complaint (OPQRST) and obtain a (SAMPLE) history.

The components of the patient assessment process include the scene survey, initial assessment (ABCs) and rapid trauma assessment or detailed physical exam. A focused physical exam may be conducted if the general impression of the patient's condition appears to be of a specific nature.

The EMS provider must constantly monitor the patient's perfusion status. Perfusion is defined as the adequate flow of blood through the body's tissues. For perfusion to be adequate the patient must have an adequate blood volume (with adequate supplies of oxygen and glucose), a properly functioning cardiovascular system and an intact neurological system for regulation of vascular dilation. Failure of the body to maintain adequate perfusion will result in signs and symptoms of shock.

Signs and symptoms of shock vary depending on the degree and cause of shock. Level of consciousness is an important assessment of the patient's vital organ perfusion status. A patient with an altered level of consciousness must be considered at risk of shock. Peripheral tissue condition is another important indicator of perfusion status. A patient with cool, clammy, pale or cyanotic skin should be considered at risk for shock.

If the patient is found to be in shock, the assessment process should be directed at finding the cause of shock, immediate interventions to support perfusion and prompt transport. Conversely, if the mechanism of injury or assessment findings suggests that the patient may have a condition that could result in shock, EMS personnel should carefully assess the patient's perfusion status and prepare to treat shock.

**The goal of 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 EMS provider must maintain a constant awareness as to what would be the best course of action for optimum and compassionate patient care. The benefit of remaining on scene to establish specific treatments verses prompt transport to a definitive care facility should be a consideration of each patient contact.

# Patient Assessment Process & Goals of Patient Care

## Notes on Shock

| Mechanism | Medical | Traumatic |
|---|---|---|
| Hypovolemia | Blood Loss – Internal Bleeding<br>Fluid Loss – Dehydration | Blood Loss – Trauma<br>Fluid Loss – Burns |
| Cardiogenic<br>(Pump failure)<br>(Obstructive) | Dysrhythmia<br>Myocardial Infarction<br>Congestive Heart Failure<br>Pulmonary Embolism | Chest Trauma<br>Tension Pneumothorax<br>Pericardial Tamponade |
| Vessel Failure<br>(Distributive) | Vasovagal Response<br>Anaphylaxis<br>Sepsis<br>Endocrine Dysfunction<br>Chemical/Poisoning | Spinal Cord Injury<br>(Neurogenic) |

# General Patient Assessment & Initial Care Procedure

## Scene Size-Up

1. Initiate body substance isolation (BSI) precautions prior to arrival at the scene for all patient contacts. Apply appropriate personal protective equipment (PPE). 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.

## General Patient Assessment

1. 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 & oriented x 3 (person, place & time)
   - **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.

# General Patient Assessment & Initial Care Procedure

## General Patient Assessment (continued)

**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)

## Initial Medical Care

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

**4.** Loosen tight clothing and reassure patient. Keep NPO (nothing by mouth) unless specified by SOP or Medical Control.

# General Patient Assessment & Initial Care Procedure

## Initial Medical Care (continued)

**5.** BLS/ILS Units: Initiate ALS intercept if indicated (Refer to *Requesting Advanced Assistance for Optimal Patient Care*).

**6.** Place the patient in a semi-Fowler's ($45^{o}$) position of comfort unless contraindicated. Patients with altered mental status should be placed on their side. The backboard should be tilted for immobilized patients with altered mental status to prevent aspiration.

**7.** 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.

**8.** 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.

**9.** Establish Medical Control contact as indicated.

**10.** Transport to the closest appropriate hospital. NOTE: Follow System-specific policies regarding patient destination and bypass procedures.

# Routine (Initial) Patient Care Protocol

## FR/EMR

FR/EMR 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.
2. Loosen all tight clothing and be prepared to expose vital body regions if necessary.
3. Reassure patient by identifying yourself, explaining how you will help them and inform the patient that additional help is en route.
4. Place patient in a position of comfort. Sit patient upright unless the patient is hypotensive (BP<100mmHg systolic) or has a potential for cervical spine injury.
5. Administer Oxygen 15 L/min via non-rebreather mask if unstable. 4 L/min by nasal cannula if stable; titrate SPO2 to maintain 94%
6. Ensure that EMS has been activated for further care and transport. Provide responding units with pertinent patient information.
7. Monitor the patient's level of consciousness, vital signs, etc. for any acute changes.

## BLS

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

1. BLS Care includes the components of First Responder Care.
2. Attach pulse oximeter and obtain analysis, if indicated.

# Routine (Initial) Patient Care Protocol

3. Initiate ALS intercept, if indicated (or ILS intercept **if** ALS is unavailable).

4. Simultaneously with above, perform physical exam/assessment, obtain baseline vital signs and obtain patient history.

5. Continue to reassess patient en route to the hospital.

6. Transport should be initiated at the earliest possible opportunity.

7. Obtain a 12-Lead EKG if indicated; transmit if applicable to appropriate ER. Provide the receiving nurse/physician with a copy of the 12-Lead upon arrival in the ED with request for physician review of the EKG as soon as possible. ***It is beyond the scope of an EMT to monitor or interpret 12 leads or cardiac rhythms.***

## ILS/ALS

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.

1. ILS/ALS Care includes all of the components of BLS Care.

2. If indicated, establish IV access using a 500ml or1000ml 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.

3. Dependent upon patient condition, consider initiating IV access en route to the hospital.

# Routine (Initial) Patient Care Protocol

**Critical Thinking Elements**

- When determining the extent of care needed to stabilize the patient, the EMS provider should take into consideration the patient's presentation, chief complaint, risk of shock and proximity to the receiving facility.
- Indication for establishing IV access is based on the patient's need for fluid replacement or for a drug administration route.
- Saline locks may be used as a drug administration route if fluid replacement is not indicated.
- IV access should not significantly delay initiation of transport or be attempted on scene with a trauma patient.
- Obtaining a 12-Lead EKG should not significantly delay initiation of transport.
- Indications for performing a 12-Lead EKG include: chest pain, epigastric pain, shortness of breath, syncope, cardiogenic shock, pulmonary edema, and vague "unwell" symptoms in diabetic & elderly patients.

# Pain Control Protocol

Pain, and the lack of relief from the pain, is one of the most common complaints among patients. Pain control can reduce the patient's anxiety and discomfort, making patient care easier. The patient's severity of pain must be properly assessed in order to provide appropriate relief. Managing pain clinically in the prehospital setting will provide greater patient care.

## FR/EMR

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

1. Render initial care in accordance with the *Routine 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.

## BLS

BLS Care should focus on the reduction of the patient's anxiety due to the pain.

1. BLS Care includes all of the components of First Responder Care.
2. Initiate ALS intercept, if indicated.

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# Pain Control Protocol

## ILS/ALS

ALS Care should focus on the pharmaceutical management of pain.

1. ALS Care includes all of the components of BLS Care.

2. In cases of **isolated extremity fractures, chest pain, burns,& discomfort from IO insertion,** pain **medication maybe given without calling medical control** if systolic BP > 90mmHg. Any other situation involving pain medication administration requires Medical Control order prior to giving the medication.

**Morphine Sulfate 2 – 5 mg IV q 5 minutes** to reduce patient anxiety and severity of pain. May repeat as needed if BP > 90. May administer 5mg IM if IV un-successful. [Not to be used in head injuries].

**Either Pain Medication Based on Paramedic Discretion**

**Fentanyl:** 50mcg IV/IM/IN for pain. Fentanyl 50mcg may be repeated every ***5 minutes*** to a total dose of 200mcg.

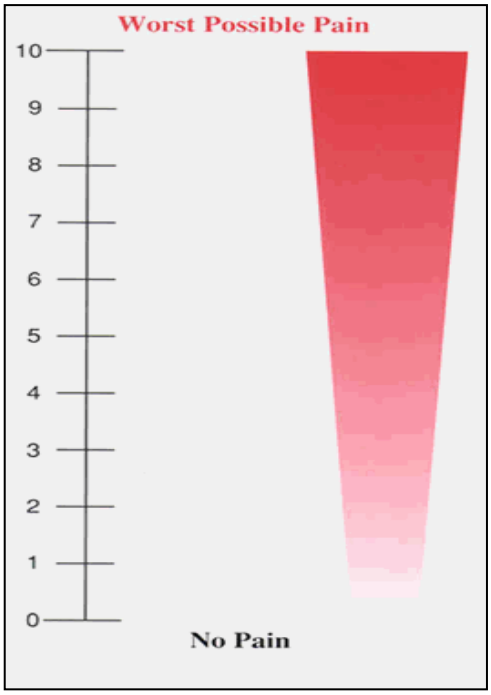
**Zofran** 4mg IV for Nausea / Emesis

**Critical Thinking Elements**

- Monitor the patient for respiratory depression when administering narcotics.
- Blood pressure should be monitored closely – check 5 minutes after narcotic administration (and prior to administering repeat doses).
- Verify that the patient is not allergic to the pharmaceutical agent prior to administration.
- Patients with a head injury / ALOC or patients with unstable vital signs **should not receive pain medications**,
- Unless using the drug induced intubation protocol.
- **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.**

# Pain Control Protocol

## Pain Assessment Scales




**0-10 Numeric Pain Scale**

**Wong-Baker Faces Pain Rating Scale**

# Basic Airway Control Procedure

Establishing and maintaining an open airway and assuring adequate ventilation is a treatment priority with all patients. Proper techniques must be used to assure treatment maneuvers do not inadvertently complicate the patient's condition.

## Basic Airway Control

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. Perform a finger sweep if a foreign object can be seen.
    **c)** If partial airway obstruction persists, treat according to AHA guidelines for resolving a <u>complete</u> airway obstruction.

# Basic Airway Control Procedure

## Basic Airway Control (continued)

**5.** Once the obstruction has been corrected:

**a)** Insert an oropharyngeal airway in the unconscious patient (without a gag reflex).
**b)** Insert a nasopharyngeal airway in the conscious patient or an unconscious patient with a gag reflex. *Note*: Do not use if the possibility of head injury exists.

**6.** Establish the presence and adequacy of breathing by observing the frequency, depth and consistency of respirations. Also, observe the chest wall for any indications of injuries which may contribute to respiratory compromise.

**7.** Supplemental oxygen should be delivered to any patient who exhibits signs of difficulty breathing, sensation of shortness of breath, and Pulse Oximetry less than 95%, use of accessory muscles, altered level of consciousness/altered mental status, cyanosis, cardiac symptoms, head injury or any indications of shock. In patients with COPD titrate SpO2 between 92-95%.

**8.** 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.

**9.** Insert King LT-D Airway of appropriate size (if possible) and continue ventilations. If available use ECO2 or Capnography.

# Basic Airway Control Procedure

**Critical Thinking Elements**

- Inadequate maintenance of the patient's airway, inappropriate airway maneuvers, using inappropriately sized airway equipment and/or failure to recognize an obstructed airway will complicate the patient's condition.
- Do NOT use the head tilt/chin lift maneuver on a patient with a suspected cervical spine injury.
- Proper facemask seal during artificial ventilations is imperative to assure adequate ventilation.
- Inadequate oxygen delivery settings (i.e. too low) will complicate the patient's condition.
- BLS providers should establish basic airway and ventilation measures and then request advanced assistance (intercept) for patients who meet the criteria for advanced airway control.
- ILS & ALS providers should establish basic airway and ventilation measures prior to intubation.
- Consider Capnography if available and attempt to maintain ETCO2: 35-45

# Airway Obstruction Procedure

An airway obstruction is life threatening and must be corrected immediately upon discovery.

1. If the patient has an obstructed airway and is still conscious:

    **a)** Encourage the patient to cough.
    **b)** Perform 5 abdominal thrusts or chest thrusts if the cough is unsuccessful.
    **c)** Repeat until the obstruction is relieved or the patient becomes unconscious.
    **d)** Administer oxygen at 15 L/min if the patient has a partial airway obstruction and is still able to breathe.

2. If the patient is unconscious:

    **a)** Open the patient's airway and attempt to ventilate.
    **b)** Reposition the head and reattempt to ventilate if initial attempt is unsuccessful.
    **c)** Straddle the patient and perform 5 abdominal thrusts.
    **d)** Perform visualized finger sweep of the patient's mouth and reattempt to ventilate.
    **e)** Repeat steps (c) and (d) if obstruction persists.
    **f)** **BLS**&**ILS** immediately initiate ALS intercept.
    **g)** **ILS** &**ALS** attempt direct extraction via laryngoscope and Magill forceps.
        1. Use the laryngoscope and examine the upper airway for foreign matter and suction as needed.
        2. Remove any foreign objects with forceps and suction.
        3. Re-establish an open airway and attempt to ventilate.
        4. If the obstruction is relieved, continue with airway control, ventilations, assessment and care.
    **h)** Continue abdominal thrust sequence if unable to relieve obstruction and expedite transport.

**Critical Thinking Elements**

- Maintain in-line c-spine stabilization using 2 EMTs in patients with suspected cervical spine injury.
- Poor abdominal thrust technique, inappropriate airway maneuvers, and/or failure to recognize an obstructed airway will complicate the patient's condition.

# Advanced Airway Control Policy

Endotracheal intubation is the best method of securing the airway and ventilating a patient in situations that warrant aggressive airway and respiratory management. If endotracheal intubation is unsuccessful, basic airway control measures should be re-established without delay. Nasotracheal intubation may also be performed. Drug Induced Intubationmay be used if other methods of airway control are not successful and intubation is needed.

## Advanced Airway Control Procedure

1. Endotracheal intubation may be attempted after assessing, opening and securing the airway in accordance with basic airway control procedures.

2. Select the proper tube size (based on patient size):
   - **a)** Adult females: 6.0 – 7.5 ETT
   - **b)** Adult males: 7.0 – 8.0 ETT

3. Attach a 10ml syringe and inflate the cuff to be sure it does not leak (the cuff must be deflated prior to insertion).

4. Insert stylet and bend to the approximate configuration of the pharynx.

5. Lubricate the ETT with a water-soluble lubricant.

6. Have suction, BVM, stethoscope, end-tidal $CO_2$ detector or Capnography and tape or a commercial ETT holder readily available.

7. Pick up the laryngoscope handle with your left hand and the appropriate blade with your right hand.

8. Holding the blade parallel to the handle, attach the blade to the handle by inserting the U-shaped indentation of the blade into the small bar at the end of the handle. When the indentation is aligned with the bar, press the blade forward and snap into place.

9. Lower the blade until it is at a right angle to the handle. The light should come on. If it does not, see if the bulb is tight and/or the batteries need to be replaced (This should be done on a daily basis so you do not have to spend valuable time fixing it at the scene of a call).

# Advanced Airway Control Policy

## Advanced Airway Control Procedure (continued)

**10.** Suction the pharynx as needed.

**11.** Pre-Oxygenate the patient with high concentration oxygen prior to each intubation attempt.

**12.** 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.

**13.** 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.

**14.** 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.

**15.** Utilize an end-tidal $CO_2$ detector or Capnography.

**16.** If breath sounds are heard on both sides of the chest, no epigastric sounds are heard, $ETCO_2$ detector or Capnography confirmation, inflate the cuff with 10ml of air and secure the tube with tape or a commercial ETT holder.

# Advanced Airway Control Policy

## Advanced Airway Control Procedure (continued)

**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. Subsequent intubation attempts can be made after the patient has been oxygenated with a BVM.

**17.** Apply a C-collar to aid in stabilizing the head/neck if potential for extubating exists.

**18.** Frequently reassess breath sounds to be sure that the ETT is still in place.

**19.** Ventilate the patient at a rate of 12 times per minute.

## Intubation of the Trauma Patient (Patient with Suspected C-Spine Injury)

Any type of airway manipulation may be dangerous during airway control of the suspected spinal injury patient. The following procedure should be used to maintain in-line stabilization during intubation attempts of the suspected spinal injury patient.

**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. Maintain stabilization of the neck in a neutral position. This should be done from below.

**3.** The rescuer performing the intubation should take a position at the patient's head that allows the rescuer to accomplish the intubation. The prone position is a posture commonly used. A position that results in the rescuer straddling the patient's head should not be used due to possible stabilization compromise.

# Advanced Airway Control Policy

## Intubation of the Trauma Patient (Patient with Suspected C-Spine Injury)

4. If a third rescuer is available, additional stabilization should be provided by grasping and stabilizing the parietal regions of the skull.

5. Once the rescuers are in position and the patient's cervical spine is stabilized, the technique for inserting the ETT should be followed without cervical manipulation.

## Prohibited Advanced Airway Procedures in the EMS System

Attempting difficult and unfamiliar procedures poses a danger to the patients those procedures are being performed on. Certain procedures that are used in the hospital setting are **not approved** for prehospital personnel in the EMS System. These include:

- Percutaneous Transtracheal Ventilation
- Cricothyrotomy/Surgical Airway

**Critical Thinking Elements**

- The greatest danger to the patient is wasting too much time attempting to intubate. Time is precious – if you cannot intubate in 2 attempts, use another method of airway control and do not delay transport.
- Intubation can cause arrhythmias produced by catecholamine release and from vagal stimulation, so monitor cardiac rhythm closely.
- 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 $ETCO_2$ or Capnography.
- A curved blade is recommended for adolescents and adults however a straight blade may be used. Use an appropriately sized straight blade to intubate pediatric patients

# Intravenous Cannulation Procedure

Intravenous cannulation is used in the Prehospital setting to establish a route for drug administration and/or to provide fluid replacement. Intravenous cannulation should not significantly delay scene times or be attempted while on scene with a trauma patient who meets load-and-go criteria.

1. Explain to the patient the need for and a brief description of the procedure.

2. Observe the universal precautions for body substance exposure.

3. Obtain an appropriately sized catheter.

4. Check the fluid.

    **a)** Is it the right fluid?
    **b)** Check the expiration date.
    **c)** Check for color and clarity (should be clear with no particles).

5. Connect the administration set to the IV fluid. Make sure that air bubbles are expelled from the tubing and that all chambers have the appropriate fluid levels.

6. Prepare veniguard (or tape).

7. Maintain a clean environment and protect the administration set from contamination. *Any IV supplies that become contaminated by inadvertently touching an object should be discarded and replaced with clean equipment (e.g. an uncapped administration set dropped on the floor).*

8. Apply a venous tourniquet just proximal to the antecubital area.

9. Select an appropriate peripheral IV site; consider using distal site first based on patient condition.

# Intravenous Cannulation Procedure

**10.** Cleanse the site with an alcohol prep pad using a circular motion moving outward from the site.

**11.** Stabilize the vein by applying traction below the puncture site.

**12.** Inform the patient of your intent to puncture the site.

**13.** Enter the vein directly from above or from the side of the site. With the bevel of the needle upward, puncture the skin at a 30 to 45 degree angle.

**14.** If you blood returns through the catheter, proceed with insertion. If you do not see blood return, release the tourniquet and discontinue the attempt. If time and patient condition allows, you may attempt another site with a new catheter (do not exceed more than two (2) attempts on scene).

**15.** Insert the catheter. Carefully lower the catheter and advance the needle and catheter just enough to stabilize the needle in the vein. Slide the catheter off of the needle into the vein.

**16.** Slightly occlude the vein proximal to the catheter with gentle finger pressure. Remove the needle and immediately dispose of it in an approved sharps container.

**17.** Release the tourniquet.

**18.** Connect the administration set to the catheter.

**19.** Open the flow regulator on the administration set and briefly allow IV fluid to run freely to assure a patent line (<20ml). If the line is patent, adjust flow rate as indicated by protocol or Medical Control order.

**20.** Secure the catheter and tubing using a veniguard or tape. Loop the IV tubing and secure to the patient's arm. Do not apply tape circumferentially to the extremity.

# Intravenous Cannulation Procedure

## Saline Locks

Saline locks may be used if fluid replacement is not indicated:

1. Assemble the pre-filled saline and syringe or draw up 2-3ml of sterile saline.
2. Obtain and inspect an injection site link. Inject saline and expel air from the injection site chamber leaving the syringe attached.
3. After successful venipuncture, connect the saline lock to the catheter.
4. Pull back (aspirate) on the syringe to confirm placement by observing for blood return. If blood is aspirated, continue by injecting 3ml of saline into the chamber. If no blood is aspirated, discontinue the attempt and prepare to repeat the procedure at a new site.
5. If fluid replacement becomes necessary, attach an administration set to the injection port by needleless device or Luer adapter.
6. Secure the catheter and link using a veniguard or tape.

## External Jugular Vein Cannulation (ALS Only)

External Jugular (EJ) access can be utilized only if traditional extremity cannulation cannot be established and the patient requires immediate stabilizing fluid replacement and/or drug administration route.

1. Position the patient supine with feet elevated.
2. Turn the patient's head in the direction away from the side to be cannulated.
3. Cleanse the site with a prep pad using a circular motion moving away from the site.
4. Stabilize the vein by applying traction just above the clavicle.

# Intravenous Cannulation Procedure

## External Jugular Vein Cannulation (continued)

5. Align the catheter and point the tip of it toward the patient's feet.

6. Enter the vein midway between the angle of the jaw and the clavicle. With the bevel of the needle upward, puncture the skin using a 30 degree angle and aim toward the shoulder on the same side.

7. If blood returns through the flash chamber, proceed with insertion. Slightly occlude the vein proximal to the catheter with gentle finger pressure. Connect the administration set to the catheter and secure the site.

   If you do not see blood return through the flash chamber and syringe, discontinue the attempt.

   ***Only one (1) attempt at EJ vein cannulation may be made in the Prehospital setting.**

**Critical Thinking Elements**

- If blood begins to back-flow in the IV tubing, check the location of the bag to assure it is in a gravity flow position and check to assure all valves are properly set. If the IV equipment is properly set and blood continues to back-flow, re-examine the vessel to assure arterial cannulation has not occurred.
- Edema, pain and lack of fluid flow at the site indicates infiltration and the IV must be discontinued.
- Do not partially withdraw a needle and reinsert into the catheter. This can cause catheter shear.
- Do not substitute a saline lock for IV fluids in trauma patients, patients who are in shock, patients with unstable vital signs or patients requiring multiple drug administrations.
- External jugular vein cannulation is contraindicated in patients with suspected cervical spine injury.

# Adult Intraosseous Cannulation Procedure (ILS/ALS Only )

It may be impossible to find an accessible vein in patients presenting with conditions such as shock from any cause, cardiac arrest, overdose with airway compromise, impairment in mentation or hemodynamic parameters, severe dehydration associated with unresponsiveness or shock and multi-system trauma. This is a challenge commonly faced by prehospital providers, which hinders optimal patient care by limiting treatment options and increasing scene time trying to obtain vascular access.

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

## Indications

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 dysrhythmias or bradycardia, severe respiratory distress with hypoxia and/or alteration in consciousness, respiratory arrest, and overdose associated with alternation in vital signs, mental status and /or dysrhythmias)

►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).

# Adult Intraosseous Cannulation Procedure (ILS/ALS Only )

## 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 in insertion)

## Considerations

●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.

## EZ-IO 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 bariatric patients.

3. Locate an appropriate insertion site. Approved sites include:
►Proximal Tibia
►Distal Tibia
►Proximal Humerus

# Adult Intraosseous Cannulation Procedure (ILS/ALS Only )

EZ-IO Procedure (continued)

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 evidence of extravasation.

9. Connect the luer-lock equipped IV administration set.

10. For **conscious** patients (or for previously unresponsive patients who become conscious): Lidocaine: 20 – 40mg (1-2cc ) IO (slowly) to reduce discomfort from infusion.

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 and secure tubing.

Adult Intraosseous Cannulation Procedure ( ILS/ALS Only )

EZ-IO Procedure (continued)

14. Morphine Sulfate: 2 – 5mg IO/IV every ***5 minutes*** to a total of 10mg to reduce the patient's pain from infusion (if the patient's systolic BP is >90mmHg.)

*OR*

Fentanyl: 50mcg IO/IV over 2 minutes for pain. Fentanyl 50mcg IO/IV may be repeated one time in ***5 minutes*** to a total of 200mcg (if the patient's systolic BP is >90mmHg).

Zofran 4mg IV **over 2 minutes** for nausea and/or vomiting.

15. Closely monitor EZ-IO site en route.

Critical Thinking Elements

- 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 IO unless absolutely necessary.

# Medication Administration Procedure

Medication administration is accomplished by specific routes as indicated by the protocols. This procedure describes the traditional medication routes for use in the Prehospital setting.

## Preparation Steps

1. Observe universal precautions for body substance exposures.
2. Confirm the drug order, amount to be given and route.
3. Confirm that the patient is not allergic to the medication.
4. Check the medication:
    - Is it the right medication?
    - Expiration date?
    - Color and clarity?
5. Explain to the patient *what* medication you are giving them and *why* you are giving it.
6. Assemble the necessary equipment.
7. Calculate and draw up the desired volume of the drug or confirm the concentration of the drug if administering from a pre-filled syringe.
8. Eject any air from the syringe.
9. Confirm the medication again:
    - Is it the **right medication**?
    - Is it the **right patient**?
    - Is it the **right dose**?
    - Is it the **right route**?
    - Is it the **right time**?
    - Is it the **right documentation** in the chart?

## Intravenous Medication Administration

This procedure utilizes an IV that has previously been established and patency has been confirmed.

1. Cleanse the injection port or Luer port with an alcohol prep pad.
2. Insert the needle into the inlet port or attach the syringe to the Luer port.
3. Stop the flow of the IV by pinching off the IV tubing above the port.
4. Inject the desired amount of drug at the rate indicated by protocol.
5. Release the IV tubing and flush with approximately 20ml of fluid to assure delivery of the drug.

# Medication Administration Procedure

## Intravenous Medication Administration (continued)

6. Properly dispose of the contaminated equipment.
7. Document the name of the medication, the dose, the route of administration and the time that the drug was administered.
8. Monitor and document the patient's response to the medication.

- If available use safety blunt tip safety needles to draw up medications.

# Medication Administration Procedure

## Subcutaneous Medication Administration

Subcutaneous injections are administered into the subcutaneous tissue (not the superficial dermis or the muscle).

1. Identify an injection site (the subcutaneous tissue over the tricep muscle of the upper arm is commonly used).
2. Clean the injection site with an alcohol prep.
3. Pull the skin away from the underlying muscle by "tenting" or pinching the site.
4. Advise the patient to expect a "stick" and to try to relax the deltoid muscle.
5. Insert the needle at a 45 degree angle into the subcutaneous 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 subcutaneous 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.

## Intramuscular Medication Administration

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).
2. Clean the injection site with 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.

# Medication Administration Procedure

## Intramuscular Medication Administration (continued)

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.

# Patient Destination Policy

Patients should be transported to the closest appropriate hospital; however a patient (or the patient's *Power of Attorney for Healthcare*) does have the right to make an informed decision to be transported to a hospital of choice. The EMS provider will explain the benefits versus the risks of transport to a more distant hospital utilizing the guidelines below.*A trauma patient may benefit from transport directly to the closest appropriate* ***Trauma Center*** *rather than the closest geographically located hospital*.

## Patient Hospital Preference Guidelines

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 at discretion of EMT or Paramedic.
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

The patient (or representative) must sign an EMS System *AMA/Refusal Form* documenting that the patient understands the risks.

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

**GALESBURG COTTAGE EMS SYSTEM**
**PREHOSPITAL CARE MANUAL**

# Patient Destination Policy

## Trauma Patient Guidelines

All **trauma patients** fall under *Field Triage Procedures and Protocols* as well as the American College of Surgeons *Triage Decision Scheme*. Any trauma patient who meets the ACS Field Triage Guidelines shall be transported to a Trauma Center unless otherwise directed by Medical Control.

- If a patient is unconscious and meets ACS Field Triage Guidelines for trauma, the patient will be taken to the highest level trauma center available.

- If a patient has an altered level of consciousness and meets ACS Field Triage Guidelines for trauma, the patient will be taken to the highest level trauma center available.

- If a patient is alert and oriented to person, place & time with stable vital signs, the patient may be taken to the hospital of his/her choice in accordance with *Patient Hospital Preference Guidelines*.

- If a family member or any other person is at the scene of an emergency and can readily prove *Durable Power of Attorney for Healthcare*, he/she can request that the patient be transported to a specific hospital in accordance with *Patient Hospital Preference Guidelines*.

- If a parent requests that a child (<18 years of age) who meets ACS Field Triage Guidelines be taken to a specific hospital, Medical Control must be contacted for the final decision.

**GALESBURG COTTAGE EMS SYSTEM**
**PREHOSPITAL CARE MANUAL**

# Transfer and Termination of Patient Care Policy

Patient abandonment occurs when there is termination of the caregiver/patient relationship without consent of the patient and without allowing sufficient time and resources for the patient to find equivalent care. This is assuming, and unless proven otherwise, there exists a need for continuing medical care and the patient is accepting the treatment.

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 EMS 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. The patient has been determined to be dead and all policies and procedures related to death cases have been followed.
6. If Medical Control concurs with a DNR order.
7. Whenever specifically requested to leave the scene due to an overbearing need (e.g. disasters, triage prioritization).
8. 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, if the following conditions exist:

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).

# Transfer and Termination of Patient Care Policy

3. More appropriate or prudent transportation is available.
4. Definitive arrangement for the transfer of care and transportation of the initial patient to other appropriate EMS personnel must be made prior to the departure of the EMS crew. The alternate arrangements should, in no way, jeopardize the well-being of the initial patient.

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.

In the event there is not a patient onboard the ambulance and an emergency situation is encountered requiring ambulance assistance; the crew may stop and render care. However, the local EMS agency should be activated and their jurisdiction respected.

**GALESBURG COTTAGE EMS SYSTEM**
**PREHOSPITAL CARE MANUAL**

# Transition of Care Policy

A smooth transition of care between EMS providers is essential for optimum patient care. First Responder and BLS non-transport 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. A smooth transition between providers is essential for good patient care. Cooperation between all EMS personnel is encouraged and expected.

## Patient Care Transition Procedure

1. EMS providers arriving at the scene of a call shall initiate care in accordance with the guidelines provided in this manual. The EMS provider must maintain a constant awareness as to what would be the best course of action for optimum and compassionate patient care. *Focus should be placed on conducting a thorough patient assessment and providing adequate BLS care*. 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.
2. 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.
3. Upon the arrival of the transporting agency, the non-transport provider should provide a detailed verbal report to the transporting provider and then **immediately transfer care to the transporting provider**. The non-transport provider may continue the establishment of BLS/ILS/ALS procedures with the concurrence of the transporting provider.
4. The transport provider should obtain report from the non-transport provider and conduct a thorough patient assessment. Treatment initiated by the non-transport provider should be taken into consideration in determining subsequent patient care steps.
5. If the provider has initiated advanced procedures, then the transport provider should verify the integrity of the procedure prior to utilizing it for further treatment (e.g. verify patency of peripheral IVs and ETTs should be checked for proper placement). *Transporting crews shall not arbitrarily avoid the use of (or discontinue) an advanced procedure established by non-transport personnel*. Rationale for discontinuing an established procedure should be documented on the patient care report.

# Transition of Care Policy

## Patient Care Transition Procedure (continued)

**6.** Properly licensed and System-certified providers may be utilized to establish ILS/ALS procedures with the concurrence of the transporting provider. EMS personnel are encouraged to use all responders for efficiency in coordinating patient care.

**GALESBURG COTTAGE EMS SYSTEM**
**PREHOSPITAL CARE MANUAL**

# Intercept Policy

When a patient's condition warrants the highest level of available care, in-field service level upgrades shall be utilized to optimize patient care. "*In-field service level upgrades*" as referred to in this policy implies services above the level of care provided by the initial responding agency. The appropriate dispatch center should be contacted for an ALS intercept, not the hospital.

If a patient's condition warrants a higher level of care and an advanced level is available, then the more advanced agency will be called for immediate assistance. Conditions warranting advanced assistance include:

- Trauma patients entrapped with extrication required.
- Patients with compromised or obstructed airways.
- Full arrests.
- Patients exhibiting signs of hypoxemia (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.

If the primary response area is covered by any combination of BLS, ILS or ALS, the highest level of service available shall be utilized for any patient whose condition warrants advanced level care as indicated. ILS may be utilized if, and only if ALS is unavailable.

When determining the need for advanced assistance, consideration should be given to the following:

- Transport time to the hospital – Units with less than a 10 minute transport time to the hospital may complete transport without an intercept.
- **Early activation** - Diligent efforts should be made to request an intercept as early as possible. This could include simultaneous dispatch of an advanced unit to the scene of the emergency.
- Rendezvous site – Intercepts should be done in a safe area, away from traffic.

# Intercept Policy

- Availability of resources – Units used for intercept should be in direct travel to the receiving hospital. Transportation shall not be delayed due to an intercept not being available. Patients should not be transported via a longer route in order to obtain an intercept.
- Decisions for or against requesting an intercept should be in the best interest of the patient based on his/her *current* medical condition, not past medical history.

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*.

Safety will be emphasized throughout the intercept and during the transfer of care. Intercepts should not take place on heavily traveled roadways if at all possible. Rendezvous sites should be predetermined by operating procedures or unit-to-radio contact. Sites that should be considered include parking lots, safe shoulders or on side streets.

The following guidelines also apply:

- Pertinent patient information should be transmitted to the intercepting personnel prior to rendezvous (i.e. nature of the problem, vitals).
- 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:

    - Emergent = Emergency transport with lights and sirens in operation.
    - Non-Emergent = Transport without lights and sirens and obeying all normal traffic laws.

**NOTE**: Transport should never be done using lights only or sirens only (follow the "*all ornothing*" rule).

# CARDIAC CARE

# Routine Cardiac Care Protocol

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.

## FR/EMR

First Responder 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 *Routine Patient Care Protocol*.

2. **Oxygen**: Administer Oxygen 15 L/min via non-rebreather mask if unstable. 4 L/min by nasal cannula if stable; titrate SPO2 to maintain 94%

3. **Aspirin (ASA)**: 324mg PO (4 tablets of 81mg chewable aspirin by mouth).

    - **Ask the patient specifically about any history of hypersensitivity to ASA.**
    - **Do not give ASA to patients with active ulcer disease, asthma or known allergy to ASA.**

# Routine Cardiac Care Protocol

## BLS Care

BLS 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.

1. Continue FR/EMR care.

2. **Nitroglycerin (NTG)**: 0.4mg SL (1 tablet or 1 metered spray dose sublingually). May repeat every ***3-5 minutes*** to a total of 3 doses (if systolic BP remains > 100mmHg).

    - 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 this criteria, consult Medical Control prior to administering NTG*.

3. Obtain **12-Lead EKG** and deliver to receiving emergency department / Medical Control if equipment is available.

4. Initiate ALS intercept if necessary and transport as soon as possible.

5. Contact receiving hospital as soon as possible.

# Routine Cardiac Care Protocol

## ILS Care

ILS 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.

1. Continue FR/EMR/BLS care.

**ILS & ALS may administer NTG when the patient's systolic BP is between 90-100mmHg if IV access has been established.**

4. Obtain **12-Lead EKG** and deliver to Medical Control.

5. **Fentanyl:** 50mcg IV over 2 minutes for pain. Fentanyl 50mcg may be repeated one time in ***5 minutes*** to a total dose of 100mcg.

6. **Zofran:**4mg IV over 2 minutes for **Nausea / Vomiting**

7. Initiate ALS intercept if necessary and transport as soon as possible (transport can be initiated at any time during this sequence).

8. **Contact Medical Control** as soon as possible.

# Routine Cardiac Care Protocol

## ALS Care

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.

1. Continue FR/EMR/BLS/ILS care

    - 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.

**ILS & ALS may administer NTG when the patient's systolic BP is between 90-100mmHg if IV access has been established.**

2. Obtain **12-Lead EKG** and deliver to Medical Control.

3. **Fentanyl:** 50mcg IV over 2 minutes for pain. Fentanyl 50mcg may be repeated one time in ***5 minutes*** to a total dose of 200mcg.

# Routine Cardiac Care Protocol

**ALS Care (continued)**

4. **Zofran:**4mg IV over 2 minutes for **Nausea / Vomiting.**
5. Transport as soon as possible (transport can be initiated at any time during this sequence).
6. **Contact Medical Control** as soon as possible.
7. If time permits, establish a 2nd line (preferably an 18g saline lock) en route.

**Critical Thinking Elements**

- Initiate ALS intercept.
- 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.
- 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.
- Do not give nitroglycerin to patients who have taken sexual enhancement medications within the past 72 hours.

# Cardiogenic Shock Protocol

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)
- Pedal edema
- Dyspnea
- 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.

## FR/EMR

**1.** Render initial care in accordance with the *Routine Patient Care Protocol*.

## BLS Care

**1.** Continue FR/EMR care.

# Cardiogenic Shock Protocol

## ILS Care

1. Continue BLS care.
2. **IV Fluid Therapy**: 250ml fluid bolus.
3. Obtain **12-Lead EKG** and deliver to Medical Control.
4. Initiate ALS intercept and transport as soon as possible.
5. **Contact Medical Control** as soon as possible.

## ALS Care

1. Continue FR/EMR/BLS/ILS care.
2. **IV Fluid Therapy**: 250ml fluid bolus.
3. If the patient has a cardiac Dysrhythmia, treat the underlying rhythm disturbance according to the appropriate SMO.
4. Obtain **12-Lead EKG** and deliver to Medical Control.
5. Transport as soon as possible (transport can be initiated at any time during this sequence) and **Contact Medical Control** as soon as possible.

# Cardiac Arrest Protocol

## FR/EMR/BLS

1. Initiate CPR if not already in progress and follow current AHA guidelines.
2. Check pulse after 2 minutes (no more than 10 seconds) No pulse CPR.
3. If available apply AED and follow prompts.
4. Place a blind insertion airway device (BIAD) King LTS-D. Once in place, ventilate with BVM 15 LPM Oxygen at 8-10 breaths/min.
5. Ensure transport EMS is enroute and **request ILS/ALS intercept early.**
6. Prepare patient for rapid transport (secured to long spine board).
7. If patient has return of spontaneous circulation (ROSC), reassess patient's breathing, maintain and assist ventilations as necessary, then vital signs.
8. If available, consider the use of waveform capnography to monitor for quality of chest compressions and ROSC.
9. If suspected opiate overdose administer nasal narcan 2mg.

## ALS/ILS

1. Continue FR/EMR/EMT care.
2. Initiate IV/IO Normal Saline TKO (20ml/hr).
3. Confirm and maintain blind insertion airway device (BIAD) if already inserted or intubate and also confirm with appropriate techniques (lungs sounds, capnography (continuously monitor), esophageal device, etc.).
4. Consider treatment of underlying etiology (i.e. Hs and Ts listed above).
5. Prepare and activate smooth but rapid transport.
6. Follow appropriate SMO/guideline based upon patient's heart rhythm.

# Cardiac Arrest Protocol

**Critical Thinking Elements**

- **Possible Causes**
- **Hypovolemia**
- **Hypoxia**
- **Hydrogen Ion (Acidosis)**
- **Hypo/Hyperkalemia**
- **Tension Pneumothorax**
- **Tamponade, Cardiac**
- **Toxins**
- **Thrombosis (Pulmonary)**
- **Thrombosis ( Coronary)**

# Resuscitation of Pulseless Rhythms Protocol

## Ventricular Fibrillation (V-fib) or Pulseless Ventricular Tachycardia (V-tach)

### FR/EMR/BLS

1. Initiate cardiac arrest protocol.

### ALS/ILS

1. Initiate *Cardiac Arrest Protocol*.
2. Evaluate rhythm after 2 minutes of CPR. If in v-fib/pulseless v-tach: defibrillate per manufacturers recommendation for bi-phasic monitors (or 360 joules mono-phasic).
3. Immediately resume CPR for 2 minutes and re-evaluate patients rhythm.
4. **Epinephrine 1:10,000**: 1mg IV/IO every***3-5 minutes*** as needed.
5. If v-fib/pulseless v-tach persist: defibrillate per manufacturers recommendation for bi-phasic monitors (or 360 joules mono-phasic).
6. Immediately resume CPR for 2 minutes and re-evaluate patients rhythm.
7. **Amiodarone** 300mg IV/IO if patient remains in v-fib/v-tach. Repeat dose: 150mg bolus IV/IO if patient remains in v-fib/pulseless v-tach following at least 2 minutes of CPR.
8. If v-fib/pulseless v-tach persist: defibrillate per manufacturers recommendation for bi-phasic monitors (or 360 joules mono-phasic).
9. Immediately resume CPR for 2 minutes and re-evaluate patients rhythm.

# Resuscitation of Pulseless Rhythms Protocol

## Ventricular Fibrillation (V-fib) or Pulseless Ventricular Tachycardia (V-tach) Cont'd

**10.** **Dextrose 50%**: 25g IV if blood sugar is < 60mg/dL.

**11.** **Narcan**: 2mg IV or 4mg IN if suspected narcotic overdose.

**12.** Transport as soon as possible.

# Resuscitation of Pulseless Rhythms Protocol

## Pulseless Electrical Activity

### FR/EMR/BLS

1. Initiate cardiac arrest protocol.

### ALS/ILS

1. Initiate *Cardiac Arrest Protocol*.
2. **IV Fluid Therapy:**250ml fluid bolus.
3. **Epinephrine** 1:10,000: 1mg IV/IO every ***3-5 minutes***
4. **Dextrose 50%:**25g IV if blood sugar is < 60mg/dL.
5. **Narcan:** 2mg IV/IN if suspected narcotic overdose.
6. Transport as soon as possible.
7. Contact the receiving hospital as soon as possible.
8. **Sodium Bicarbonate**: 50meq IV if known tricyclic antidepressant (TCA) overdose, Aspirin (ASA) overdose or suffers from chronic renal failure.

# Resuscitation of Pulseless Rhythms Protocol

## Asystole

### FR/EMR/BLS

1. Initiate cardiac arrest protocol.

### ALS/ILS

1. Continue FR/EMR/BLS care
2. Confirm asystole in *two (2) leads*.
3. **Epinephrine 1:10,000**: 1mg IV every ***3-5 minutes***.
4. **Dextrose 50%**: 25g IV if blood sugar is < 60mg/dL.
5. **Narcan:**2mg IV/IN if suspected narcotic overdose.
6. Consider "cease efforts" order (see *Resuscitation vs. Cease Efforts Policy*).
7. Transport as soon as possible.
8. Contact the receiving hospital as soon as possible.

**Critical Thinking Elements**

- **Trauma patients in cardiac arrest should be evaluated for viability. If the patient is to be resuscitated, begin CPR and LOAD & GO.**
- **The Prehospital goal of resuscitating cardiac arrest is to return the patient to a perfusing rhythm and providing stabilizing treatment en route. Once first line electrical and pharmacological treatments are attempted, the patient should be transported without delay to the closest appropriate hospital.**
- **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 (e.g. airway obstruction, metabolic shock, hypovolemia, central nervous system injury, respiratory failure, anaphylaxis, drowning, overdose, poisoning, etc.).**

# Unstable Bradycardia Protocol

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).

**FR/EMR/BLS**

1. Render initial care in accordance with the *Routine Cardiac Care Protocol*.
2. Initiate ALS intercept.
3. BLS units transport as soon as possible.

***BLS obtain and transmit 12-Lead ECG if available.**

# Unstable Bradycardia Protocol

**ALS/ILS**

1. Continue FR/EMR/EMT care.

2. **Atropine**: 0.5mg IV 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.

3. **Immediate Transcutaneous Pacing**: If the patient is in a **3rd degree AV block (**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 electrical capture is achieved with a pulse.
   - Refer to the *Transcutaneous Pacing Procedure* for additional information.

4. **Versed** 2-4mg IV **or Diazepam (Valium)**: 5-10mg IV for patient comfort after pacing is initiated. Re-check vital signs 5 minutes after administration. MONITOR RESPIRATORY STATUS CLOSELY. Additional doses require Medical Control order.
   ***ALS ONLY***

5. Transport as soon as possible (*Transport can be initiated at any time during this sequence*).

6. **Contact Medical Control as soon as possible.**

# Unstable Bradycardia Protocol

**Critical Thinking Elements**

- **Treat the patient – not the monitor. Bradycardia does not necessarily mean that the patient is unstable or requires intervention.**
- **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 syndrome*), and other medical history.**
- **Assess for underlying causes (e.g. hypovolemic shock, cardiogenic shock, and overdose).**
- **Atropine administration or TCP if the patient is unstable.**
- **If the patient's presenting rhythm is a 3$^{rd}$ degree block, immediately prepare to pace. If the patient is symptomatic, pacing should be started without delay.**
- ***Bradycardia may be present due to increased intracranial pressure from a CVA or head injury*.**
- **Contact Medical Control.**
- **Treat underlying etiologies according to protocol.**

# Narrow Complex Tachycardia Protocol

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 assessment of the patient with tachycardia should include evaluation for signs and symptoms of hypoperfusion.

The patient is considered **stable** if the patient is alert and oriented with warm & dry skin and has 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 is hypotensive.

## FR/EMR/BLS

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 *Routine Cardiac Care Protocol*.

2. Initiate ALS intercept and transport as soon as possible.

## ALS/ILS

1. Continue FR/EMR/BLS care.

2. **Adenosine (Adenocard)**: If regular monomorphic 6mg IV {rapid IV push} if the patient is alert and oriented, has a systolic BP > 100mmHg, has a HR > 150bpm and is *obviously* not in atrial fib or atrial flutter. If no response after ***2 minutes***, administer 12mg IV {rapid IV push}.

3. Pre-Medicate (Sedate) if possible: **Versed**, 2-4mg IV Slowly or **Valium,** 5-10mg IV Slowly. Call Medical Control for orders if additional sedation is needed.

# Narrow Complex Tachycardia Protocol

4. **Synchronized Cardioversion**: If the patient has an altered level of consciousness, diaphoresis, dizziness, chest pain or discomfort, ventricular ectopy and/or is hypotensive:
   - **a)** Narrow regular complex: Synchronized cardioversion at **50-100 Joules**** if tachycardia persists.
   - **b)** Narrow irregular complex: Synchronized cardioversion at **120-200 Joules**** if tachycardia persists.
   - **c)** Wide regular complex: Synchronized cardioversion at **100 Joules**** if tachycardia persists.
   - **d)** Wide irregular complex: Defibrillation dose **NOT SYNCHRONIZED**

5. Contact the receiving hospital as soon as possible.

**Critical Thinking Elements**

- **Treat the patient – not the monitor. Tachycardia does not necessarily mean that the patient is unstable or requires intervention.**
- **When administering Adenosine confirm heart rate with a manual pulse check.**
- **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.**
- **DO NOT administer Adenocard if the heart rate is < 150 bpm without consulting Medical Control.**
- **When administering Adenocard, be prepared for immediate defibrillation if the rhythm converts to v-fib.**

# Wide Complex Tachycardia Protocol

The patient is considered **stable** if the patient is alert & oriented with warm & dry skin and 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.

ALS/ILS ONLY
WITH UNSTABLE PATIENTS GO DIRECTLY TO CARDIOVERSION

## FR/EMR/BLS

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 *Routine Cardiac Care Protocol*.
2. If patient's condition warrants, consider ALS intercept.

## ILS/ALS

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. Continue FR/EMR/BLS care.
2. If patient is stable consider vagal maneuvers, ***No carotid massage.**
3. **Adenosine (Adenocard)**: 6mg IV {rapid IV push} if the patient is alert and oriented, has a systolic BP > 100mmHg, has a HR > 150bpm and is *obviously* not in atrial fib or atrial flutter. If no response after ***2 minutes***, administer 12mg IV {rapid IV push}.
4. **Amiodarone:** 150mg Slow IV push over 10 minutes.

# Wide Complex Tachycardia Protocol

**ILS/ALS Cont'd**

5. **Pre-Medicate** (Sedate) if possible: **Versed,** 2-4mg IV Slowly or **Valium**, 5-10mg IV Slowly. Call Medical Control for orders if additional sedation is needed.

6. **Synchronized Cardioversion**: If the patient has an altered level of consciousness, diaphoresis, dizziness, chest pain or discomfort, ventricular ectopy and/or is hypotensive:
   - **a)** Narrow regular complex: Synchronized cardioversion at **50-100 Joules**** if tachycardia persists.
   - **b)** Narrow irregular complex: Synchronized cardioversion at **120-200 Joules**** if tachycardia persists.
   - **c)** Wide regular complex: Synchronized cardioversion at **100 Joules**** if tachycardia persists.
   - **d)** Wide irregular complex: Defibrillation dose **NOT SYNCHRONIZED**

7. **Contact Medical Control** as soon as possible.

8. If the patient becomes pulseless at any time, refer to the *Resuscitation of Pulseless Rhythms Protocol* ***(V-fib or Pulseless V-tach)***.

**Critical Thinking Elements**

- **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.**
- **Rhythm and pulse status should be verified after each cardioversion.**
- **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*.**
- **Watch for signs of Lidocaine toxicity including: disorientation, agitation, decreased hearting, tinnitus, seizures, paresthesia, hypotension, muscle twitching and slurred speech.**

# Implanted Cardiac Defibrillator (AICD) Protocol

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.

## FR/EMR/BLS

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 *Routine Cardiac Care Protocol*.
2. Initiate ALS intercept and transport as soon as possible.

## ILS/ALS

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. Continue FR/EMR/BLS Care.
2. Treat arrhythmias per applicable protocol and transport as soon as possible.
3. Treat patient pain and nausea according to pain protocol.
4. Contact the receiving hospital as soon as possible.
5. If the patient becomes pulseless at any time, refer to the *Resuscitation of Pulseless Rhythms Protocol*.

**Critical Thinking Elements**

- **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.**

# Manual Defibrillation Procedure

Electrical defibrillation is recognized as the most effective method of terminating ventricular fibrillation. It is a vital link in the chain of survival in the case of sudden death. Defibrillation is accomplished by passage of an appropriate electrical current through the heart, sufficient to depolarize a critical mass of the left ventricle.

1. Defibrillation should be preceded with 2 minutes of CPR if the patient has no pulse, is breathless and is in V-fib or V-tach.
2. The monitor/defibrillator should be turned on as soon as patient contact is made.
3. Apply the Quick Combo pads or Fast Patches with cables as soon as possible. The pads must be attached to the defibrillator cables prior to placement on the patient's chest.
4. The negative electrode should be placed to the right of the upper sternum just below the right clavicle and the positive electrode should be placed laterally to the left nipple in the midaxillary line (approximately 2-3 inches below the left armpit).
5. For adults **defibrillate at manufacturer's recommendation**. Make sure no personnel are directly or indirectly in contact with the patient. Emphasize your intention to defibrillate by loudly stating "CLEAR!" and then delivering the shock. Resume CPR for 2 minutes, then:
6. Observe for change in rhythm. If there is a change, reassess for pulse. If the patient remains in a shockable rhythm with no pulse, immediately repeat defibrillation at **manufacturer's recommendation.** Resume CPR for 2 minutes, then:
7. Observe for change in rhythm. If there is a change, reassess for pulse. If the patient remains in a shockable rhythm with no pulse, immediately repeat defibrillation at **manufacturer's recommendation.** Resume CPR for 2 minutes, then:
8. Follow appropriate protocols for rhythm changes.

**Critical Thinking Elements**

- **Patients with AICDs or pacemakers are treated the same as any other patient. However, do not place the electrodes (defibrillation pads) over the AICD or pacemaker site.**
- **Adjust the pads as necessary. Anterior-posterior placement may be necessary. Position the positive pad on the anterior chest just to the left of the sternum and place the negative pad posteriorly just to the left of the spinal column.**
- **Shocks delivered to the patient prior to arrival should be taken into consideration during the transition of care. Crews may want to utilize the AED equipment and personnel for subsequent defibrillation.**
- **If V-fib or V-tach recurs during the arrest sequence after a perfusing pulse was achieved, defibrillation is re-initiated at the energy level that previously resulted in *successful* defibrillation.**

# Automated Defibrillation Procedure

Electrical defibrillation is recognized as the most effective method of terminating ventricular fibrillation. It is a vital link in the chain of survival in the case of sudden death. Defibrillation is accomplished by passage of an appropriate electrical current through the heart, sufficient to depolarize a critical mass of the left ventricle.

1. The AED should be applied immediately using adult pads if the patient has no pulse, is breathless and is at least 8 years of age or older. *Pediatric pads should be used on children between ages 1-8 (or adult pads in the anterior/posterior position if pediatric pads are unavailable).* The AED should be turned on as soon as patient contact is made.
2. Apply the Quick Combo pads or Fast Patches with cables as soon as possible. The pads must be attached to the defibrillator cables prior to placement on the patient's chest.
3. The negative electrode should be placed to the right of the upper sternum just below the right clavicle and the positive electrode should be placed laterally to the left nipple in the midaxillary line (approximately 2-3 inches below the left armpit).
4. Follow AHA guidelines or appropriate protocol.

# Cardioversion Procedure

Electrical cardioversion is the therapy of choice for hemodynamically unstable ventricular or supraventricular tachydysrhythmias with a pulse. Synchronization of the delivered energy reduces the potential for induction of V-fib that can occur when electrical energy impinges on the relative refractory period of the cardiac cycle.

1. Apply Quick Combo pads or Fast Patches according to protocol and apply regular limb leads.
2. Push the synchronize sensor button on the defibrillator.
3. Confirm that the monitor is sensing "R" waves on the monitor screen (this is denoted by the darker mark on the screen with each complex).
4. Select the appropriate energy setting.
5. Press the charge button.
6. Depress the discharge buttons simultaneously and wait for the shock to be delivered.
7. Note the rhythm and treat according to the appropriate protocol.
8. If the patient becomes pulseless at any time, turn off the synchronizer circuit and refer to the *Resuscitation of Pulseless Rhythms Protocol*.

**Critical Thinking Elements**

- **The energy levels vary in accordance with protocol for the presenting rhythm.**
- **Administration of Versed IV/IO/IN may be necessary.**
- **The synchronizer circuit MUST be activated.**
- **There may be a delay between pressing the discharge buttons and delivery of the counter shock due to the synchronization process.**
- **You must apply the limb leads so the monitor can sense the rhythm and deliver the shock at the same time.**

# Transcutaneous Pacing (TCP) Procedure

Transcutaneous pacing (TCP) is used to deliver an electrical stimulus to the heart that acts as a substitute for the heart's conduction system and is intended to result in cardiac depolarization and myocardial contraction.

TCP should be utilized for patients with symptomatic bradycardia, namely Type II 2nd Degree AV Block and 3rd Degree AV Block (Complete Heart Block).

1. Confirm the presence of the arrhythmia and the patient's hypoperfusion status.
2. Initiate *Routine ALS Care,* including application of the cardiac monitor using the regular limb leads.
3. Apply the pacing pads to the patient using anterior-posterior placement. Place the negative electrode on the anterior chest between the sternum and left nipple (the upper edge of the pad should be below the nipple line). Place the positive electrode on the left posteriorly to the left of the spine beneath the scapula.
4. Activate the pacer mode and observe a marker on each QRS wave. If the marker is not present, adjust the EKG size.
5. Set the target rate at **70 bpm**.
6. Set the current at **minimum** to start.
7. Activate the pacer and observe pacer spikes.
8. Increase the current slowly until there is evidence of electrical and mechanical capture.
9. Palpate patient's pulse and check BP.
10. If the patient is conscious, you may administer **Versed 2-4mg** IV/IO/IN for patient comfort.
11. Document the patient's rhythm, vitals & tolerance of pacing and report the results to Medical Control.

**Critical Thinking Elements**

- **Remember to evaluate the effectiveness of external pacing by assessing the electrical capture (presence of pacer spikes on the EKG) and mechanical capture (presence of a pulse).**

# 12-Lead EKG Procedure

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

Indications for a 12-Lead EKG include:

- Chest pain / discomfort
- Epigastric pain
- Shortness of breath
- Syncope (or near-syncope)
- Cardiogenic shock
- Pulmonary edema
- 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 a 12-Lead EKG.
2. The EKG should be done prior to transport if possible and transmitted (if available) to emergency department / Medical Control.
3. **Contact Medical Control** as soon as possible.
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.

# MEDICAL & RESPIRATORY PROTOCOLS

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# Respiratory Distress Protocol

## Asthma and COPD

### FR/EMR

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 *Routine Patient Care Protocol*.

2. **Proventil (Albuterol)**: 2.5mg in 3ml of normal saline via nebulizer 6-8 LPM O2 over 6-8 minutes. May repeat every as needed.

3. Be prepared to assist patient respirations with BVM.

### BLS

1. Continue FR/EMR Care.

2. **Proventil (Albuterol)**: 2.5mg in 3ml of normal saline mixed with **Ipratropium (Atrovent)** 0.5mg via nebulizer 6-8 LPM O2 over 6-8 minutes 1 time only. May repeat **Proventil (Albuterol)**: 2.5mg in 3ml of normal saline via nebulizer 6-8 LPM O2 over 6-8 minutes as needed.

3. **CPAP:** If systolic BP>100mmHg

    **a)** If systolic BP between 90-100, Contact Medical Control.
    **b)** Do not use CPAP if systolic BP is <90mmHg, See CPAP procedure.

4. Initiate ALS intercept if needed and transport as soon as possible.

# Respiratory Distress Protocol

## Asthma and COPD (continued)

### ILS

ILS 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.** Continue FR/EMR/BLS Care.

### ALS

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.** **Epinephrine 1:1000**: 0.3mg SQ if the patient is suffering status asthmaticus and does not improve with Albuterol 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.*

**2.** **Solu-Medrol** 125mg slow IV push with Medical Control Order.

# Respiratory Distress Protocol

## CHF / Pulmonary Edema

### FR/EMR

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 *Routine Patient Care Protocol*.

### BLS

1. Continue EMR/FRD care.
2. **CPAP:** If systolic BP>100mmHg

    **c)** If systolic BP between 90-100, Contact Medical Control.
    **d)** Do not use CPAP if systolic BP is <90mmHg, See CPAP procedure.

3. Initiate ALS intercept and transport as soon as possible.

### ILS/ALS

1. Continue BLS care.
2. **Nitroglycerin (NTG)**: 0.4mg SL (1 tablet or 1 metered spray dose sublingually). May repeat every ***3-5 minutes*** to a total of 3 doses (if systolic BP remains > 100mmHg).
3. Initiate ALS intercept if needed and transport as soon as possible.

# Continuous Positive Airway Pressure (CPAP) Procedure

CPAP (Continuous Positive Airway Pressure) can be applied to achieve PEEP (Peak End Expiratory Pressure) for patients presenting with signs & symptoms of pulmonary edema / CHF. The patient must be alert and able to adequately ventilate spontaneously in order for CPAP to be initiated. **For use on patients at least 16 years of age.**

1. Assess vital signs.
2. If the systolic BP is between 90-100mmHg, **contact Medical Control** prior to initiating.
3. Connect the generator to the oxygen outlet and adjust flow rate to desired PEEP.
4. Apply and secure mask to patients face.
5. Treat continuously while en route to the receiving facility.
6. Obtain and record vital signs every 5 minutes.
7. In case of life-threatening complications:
   - **a)** Stop CPAP treatment.
   - **b)** Offer reassurance.
   - **c)** Institute appropriate BLS & ALS support per protocol.
   - **d)** On arrival at the receiving hospital, immediately communicate any adverse reactions to emergency department staff.
8. Documentation in the patient care record should include:
   - **a)** Detailed description of initial assessment findings.
   - **b)** Vitals, including pulse oximetry, prior to initiating CPAP.
   - **c)** Vitals (& pulse oximetry) every 5 minutes.
   - **d)** Patient response to treatment (positive effects, no change or adverse reaction).

**CONTRAINDICATIONS FOR CPAP**

- **Severe cardio-respiratory instability and impending arrest**
- **Respiratory or cardiac arrest**
- **Upper airway abnormalities or trauma**
- **Penetrating chest trauma**
- **Compromised thoracic organs**
- **Persistent nausea & vomiting**
- **Gastric distention**
- **Obtunded patient / Questionable ability to protect airway**

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# Altered Level of Consciousness (ALOC) Protocol

## FR/EMR

1. Render initial care in accordance with the *Routine Patient Care Protocol*.

2. Perform blood glucose level test.

3. **Oral Glucose**: 15g PO **if** the patient has a history of diabetes and has in possession a tube of Oral Glucose, is alert to verbal stimuli, is able to sit in an upright position, has good airway control and an intact gag reflex.

4. 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).

5. If a narcotic [opiate] overdose suspected, administer **Narcan:** 2mg IN.

## BLS

1. Continue FR/EMR Care.

2. **Glucagon**: 1mg IM or 2mg IN if blood sugar is < 60mg/dL, the patient is unresponsive and/or has questionable airway control or absent gag reflex

3. Initiate ALS intercept if needed and transport as soon as possible.

# Altered Level of Consciousness (ALOC) Protocol

## ALOC Continued

### ILS/ALS

1. Continue FR/EMR/BLS Care.

2. **Dextrose 50%**: 25g IV if blood sugar is < 60mg/dL.

3. **Narcan**: 0.4-2mg IV/IO or 2mg IN if no response to Dextrose within 2 minutes. May repeat if no response in ***5 minutes***.

**Critical Thinking Elements**

- **Consider possible C-spine injury. Maintain the patient's airway while protecting the cervical spine by using a modified jaw-thrust maneuver without head-tilt maneuver.**
- **No intercept is required if the patient becomes alert & oriented after the administration of Oral Glucose unless the patient has a condition that warrants advanced assistance.**
- **Look for Medic Alert tags.**
- **Vitals and GCS should be recorded every 5 minutes.**
- **BLS & ILS may assist the patient with the administration of the Glucagon auto-injector (if in possession of the patient).**
- **After administration of Dextrose, allow 2 minutes before administration of Narcan.**
- **Patient must be alert to verbal stimuli, be able to sit upright, have good airway control and intact gag reflex to administer Oral glucose.**

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# Suspected Stroke Protocol

## Cincinnati Prehospital Stroke Scale / FAST

To facilitate accuracy in diagnosing stroke and to expedite transport, an easy-to-use neurological examination tool is recommended. Although there are several different types available, the most "user-friendly" are the Cincinnati Prehospital Stroke Scale and the FAST test.

**FAST Test**

**Facial Droop**
**Arm Drift**
**Speech Abnormalities**
**Time of Onset**

**Table 3. Cincinnati Prehospital Stroke Scale[31]**

**Facial Droop** (Ask patient to smile)
- Normal: No facial droop
- Abnormal: One side of face does not move as well as the other

**Arm Drift** (Ask patient to extend both arms for 10 seconds)
- Normal: Both arms move the same or not at all
- Abnormal: One arm drifts down

**Speech** (Ask patient to repeat, "The sky is blue in Cincinnati")
- Normal: Correct speech
- Abnormal: Slurred speech, wrong words, no words

**FR/EMR/BLS**

1. Render initial care in accordance with the *Routine Patient Care Protocol*.
2. **What time was the patient last seen normal?**
3. Perform **blood glucose level test** to rule out low blood sugar as a reason for ALOC.
4. **Oral Glucose**15g if <60mg/dl, or <80mg/dl with signs and symptoms of hypoglycemia. *Patient must be alert to verbal stimuli, able to sit upright, have good airway control and intact gag reflex.*
5. **Glucagon**: **(BLS ONLY)**1mg IM if blood sugar is < 60mg/dL
6. Perform a 2nd **blood glucose level test** to re-evaluate blood sugar 5 minutes *after treatment.*

# Suspected Stroke Protocol

## Suspected Stroke (continued)

7. Initiate ALS intercept if needed and **transport without delay**.

8. Check and record vital signs and GCS every ***5 minutes*** to include FAST exam or Cincinnati Prehospital Stroke Scale (positive or negative)

9. If suspected Narcotic [Opiate] overdose administer **Narcan:** 2mg IN (IM for BLS)

## ILS/ALS

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. Continue with FR/EMR/BLS care

2. **What time was the patient last seen normal?**

3. Perform **blood glucose level test**.

4. **Dextrose 50%**: 25g IV if blood sugar is < 60mg/dL.

5. **Glucagon**: 1mg IM if 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 treatment.

7. **Narcan**: 2mg IV/IM/IO if suspected narcotic overdose. May repeat 2mg if no response in ***5 minutes***.

8. **Valium**: 5mg IV for seizure activity. May repeat 5mg every ***2 minutes*** to stop seizure activity if indicated.

    a. Or **Versed** 2mg IV over 1 minute for seizure activity. May repeat **Versed** 2mg IV every 5 minutes as needed for a total of 10mg.

# Suspected Stroke Protocol

## Suspected Stroke (continued)

i. **OR Versed**5mg IM if the patient is seizing and attempts at IV access have been unsuccessful. May repeat dose x1 in 15 minutes if the patient is still seizing.

b. **Versed:** 10mg IN may be used if unable to obtain IV access. (1ml per each nare)

**9. Transport without delay**.

**10.** Check and record vital signs and GCS every ***5 minutes***.

**11.** Contact the receiving hospital as soon as possible. Advise them of "possible stroke" if FAST exam is positive.

**Critical Thinking Elements**

- **Stroke onset time (defined as the last time the person was known to be normal) is key in determining the eligibility of IV TPA. EMS personnel should ask family members or bystanders the stroke onset time if the patient is unable to provide that information.**
- **IV TPA must be given within 180 minutes (3 hours) of the onset of ischemic stroke so do not delay transport.**
- **Maintain the head/neck in neutral alignment. Elevate the head of the cot 30 degrees if the systolic BP is > 100mmHg (*this will facilitate venous drainage and help reduce ICP*).**
- **Bradycardia may be present in a suspected stroke patient due to increased ICP. Do NOTgive Atropine if the patient's BP is normal or elevated. Contact Medical Control.**
- **Monitor and protect the patient's airway.**
- **Spinal immobilization should be provided if the patient sustained a fall or other trauma.**

# Status Epilepticus / Seizure Protocol

## FR/EMR/BLS

1. Render initial care in accordance with the *Routine Patient Care Protocol*.
2. Perform **blood glucose level test**.
3. **Oral Glucose**15g if <60mg/dl, or <80mg/dl with signs and symptoms of hypoglycemia. *Patient must be alert to verbal stimuli, able to sit upright, have good airway control and intact gag reflex.*
4. **Glucagon**: **(BLS ONLY)** 1mg IM if blood sugar is < 60mg/dL.
5. Perform a 2nd **blood glucose level test** to re-evaluate blood sugar 5 minutes *after treatment.*
6. If patient's condition warrants, consider ALS intercept (BLS only).
7. Check and record vital signs and GCS every ***5 minutes***
8. If suspected Narcotic [Opiate] overdose administer **Narcan** 2mg IN. ***BLS only can give narcan IM.***

## ILS/ALS

1. Continue with FR/EMR/BLS care.
2. Perform **blood glucose level test**.
3. **Dextrose 50%**: 25g IV if blood sugar is < 60mg/dL.
4. **Glucagon**: 1mg IM if blood sugar is < 60mg/dL and unable to establish an IV.

# Status Epilepticus / Seizure Protocol

## Seizure Protocol Continued

5. Perform a 2nd **blood glucose level test** to re-evaluate blood sugar 5 minutes after treatment. Repeat Dextrose if BS remains < 60mg/dL.

6. **Narcan**: 2mg IV, IM or SQ if no response to Dextrose within 2 minutes. May repeat 2mg IV, IM or SQ if no response in ***5 minutes***.

7. **Valium**: 5mg IV for seizure activity. May repeat 5mg every ***2 minutes*** to stop seizure activity if indicated.

    a. Or **Versed**2mg IV over 1 minute for seizure activity. May repeat **Versed** 2mg IV every 5 minutes as needed for a total of 10mg.
        i. **OR Versed**5mg IM if the patient is seizing and attempts at IV access have been unsuccessful. May repeat dose x1 in 15 minutes if the patient is still seizing.
    b. **Versed** 10mg IN may be used if unable to obtain IV access. (1ml per each nare)

8. Transport as soon as possible.

9. Contact the receiving hospital as soon as possible.

# Hypertensive Crisis Protocol

A hypertensive emergency is an elevation of the BP that may result in organ damage or dysfunction. The organs most likely damaged by a hypertensive emergency are the brain, heart and kidneys. Hypertension is also an indication that an underlying condition may exist which is causing the brain to demand more blood from the cardiovascular system. It can also be an indication of head injury with increased ICP, hypoxia or endocrine dysfunction. The goal of treatment is a slow, gradual reduction in BP rather than an abrupt lowering of BP that may cause further neurological complications.

## FR/EMR/BLS

1. Render initial care in accordance with the *Routine Patient Care Protocol*.
2. If patient's condition warrants, consider ALS intercept.
3. Check and record vital signs and GCS every ***5 minutes***.
4. Contact the receiving hospital as soon as possible.

## ILS/ALS

1. Continue with FR/EMR/BLS care
2. **Transport suspected stroke patients without delay**.
3. Check and record vital signs and GCS every ***5 minutes***.
4. Contact the receiving hospital as soon as possible.

**Critical Thinking Elements**

- **A patient with a systolic BP > 150mmHg and/or diastolic BP > 90mmHg without neurological deficit should be considered stable.**
- **A patient with a diastolic BP > 130mmHg with non-traumatic neurological deficits (e.g. visual disturbances, seizure activity, paralysis, ALOC) and/or chest pain/discomfort and/or pulmonary edema should be considered an acute hypertensive crisis.**
- **Assess for chest pain/discomfort and/or pulmonary edema. If present, treat per appropriate protocol.**
- **If patient presents with seizure activity, follow seizure protocol**

# Acute Abdominal Pain Protocol

## EMR/FR/BLS Care

1. Render initial care in accordance with the *Routine Patient Care Protocol*.
2. Allow the patient to remain in a position that is most comfortable.
3. If patient's condition warrants, consider ALS intercept.

## ILS/ALS

1. Continue EMR/FR/BLS care.
2. Allow the patient to remain in a position that is most comfortable.
3. **IV Fluid Therapy**: 250ml fluid bolus if the patient is hypotensive to achieve a systolic BP of at least 100mmHg.
4. **Zofran 4mg** IV over 2 minutes or IM for nausea & emesis.
5. **Morphine Sulfate**2 – 5 mg IV every 5 minutes for pain/anxiety.
6. **Fentanyl:** 50mcg IV/IM/IN for pain. Fentanyl 50mcg may be repeated every ***5 minutes*** to a total dose of 200mcg.

**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.**

# Nausea/Vomiting Protocol

## EMR/FR/BLS Care

1. Render initial care in accordance with the *Routine Patient Care Protocol*.
2. **Zofran ODT** 4mg **BLS ONLY**
3. If patient condition warrants, consider ALS intercept.

## ILS/ALS

4. Continue EMR/FR/BLS care.
5. **Zofran:** 4 mg IV over 2 minutes or IM if IV not established or **Zofran ODT** 4mg.
6. **Diphenhydramine** 25mg IV or 50mg IM if Zofran is not available

# Allergic/Anaphylaxis Protocol

## EMR/FR

1. Render initial care in accordance with the *Routine Patient Care Protocol*.

2. **Epi-Pen**: 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.

3. **Proventil (Albuterol)**: 2.5mg in 3ml of normal saline via nebulizer over 6-8 minutes. May repeat as needed.

## BLS

4. Continue EMR/FR care.

5. If patient's condition warrants, consider ALS intercept.

6. **Proventil (Albuterol)**: 2.5mg in 3ml of normal saline mixed with **Ipratropium (Atrovent)** 0.5mg via nebulizer 6-8 LPM O2 over 6-8 minutes **1 time only**. May repeat **Proventil (Albuterol)**: 2.5mg in 3ml of normal saline via nebulizer 6-8 LPM O2 over 6-8 minutes as needed.

7. **Epi-Pen**: 0.3mg IM OR **Epinephrine** 1:1000 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.

8. Contact receiving hospital as soon as possible.

## ILS

9. Continue EMR/BLS care.

10. **IV Fluid Therapy**: 250ml fluid bolus if patient is hypotensive to achieve a systolic BP of at least 100mmHg.

**11. Benadryl**: 50mg IV or IM for severe itching and/or hives

**12.** Contact receiving hospital as soon as possible.

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# Allergic Reaction / Anaphylaxis Protocol

## ALS Care

**1.** Continue ILS care.

**2. Epinephrine 1:10,000**: 0.1-0.25mg (1-2.5ml) IV if peripheral access has been established and the patient has respiratory distress (inspiratory & expiratory wheezing, stridor and/or laryngeal edema), hypotension and/or ALOC.

**3. Solu-Medrol:** 125mg IV.

**4.** Transport as soon as possible.

**5.** Contact the receiving hospital as soon as possible.

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# Sepsis Protocol

**Indications:**
Any patient, over the age of 18, with suggestion of infection or being treated for infection (i.e. cough, shortness of breath, diarrhea, abdominal pain, central line infection, wound, cellulitis, recent procedure, immunocompromise) AND at least two following of the following (**new to patient**):

Heart rate > 90 beats per minute
Respiratory rate > 22 breaths per minute or SpO2 < 90% on room air
Hyperthermia (>100.4oF or 38oC) or hypothermia (<96.8oF or 36oC)
SBP ≤ 90 mmHg
Altered mental status or decreased LOC

If time permits, attempt to obtain a blood glucose reading every 5 minutes and document reading**….all levels (EMR, ILS, ALS).**

**Be sure to document any of the above findings.**

## EMR/FR/BLS

1. Routine patient care.

2. If patient's condition warrants, consider ALS intercept.

3. Contact receiving hospital and notify them of a suspected sepsis patient as soon as possible.

## ILS/ALS

1. Continue EMR/FR/BLS care.

2. Initiate IV/IO **normal saline and give a 30ml/kg bolus**, **make sure you re-assess lung sounds and let the hospital staff know the total amount infused.**

# Drug Overdose and Poisoning Protocol

## EMR/FR/BLS

1. Consider possible scene & patient contamination and follow agency safety procedures.
2. Render initial care in accordance with the *Routine Patient Care Protocol*.
3. **Narcan**: 2mg IN if suspected narcotic overdose. May repeat 2mg IN if no response in ***5 minutes.*** ***BLS only can give narcan IM.***
4. If patient's condition warrants, consider ALS intercept.

## ILS

ILS 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. Continue FR/EMR/BLS care.
3. **Narcan**: 0.4-2mg IV/IO if suspected narcotic overdose. May repeat if no response in ***5 minutes***.
4. **IV Fluid Therapy**: 250ml fluid bolus if the patient is hypotensive to achieve a systolic BP of at least 100mmHg.
5. Contact the receiving hospitalas soon as possible or Medical Control if necessary.

## ALS

1. Continue ILS care.
2. **Sodium Bicarbonate**: 50meq IV if known tricyclic antidepressant (TCA) or Aspirin (ASA) overdose.

# Drug Assisted Intubation
# (ALS Only)

**Indications:**

1. Patient is unable to protect and/or maintain an adequate airway despite the use of basic airway adjuncts.

2. Patient is unable to maintain appropriate oxygenation/ventilation or respiratory failure, despite the use of medications, BVM and/or/CPAP.

3. Anticipate or pending airway compromise due to trauma, burns or head injury.

**Preparation:**

1. Assess and treat patient pre appropriate protocol

2. Apply oxygen with BVM or NRB have suction ready.

3. Prepare and check all ETT equipment or endotracheal intubation.

4. Draw up drugs into syringes.

5. If not performed prior , establish IV access, apply cardiac monitor and pulse oximeter. If available apply capnography.

Procedure:

1. Pre-oxygenate with 100% oxygen by non-rebreather mask for 3-5 minutes. If ventilation is required, ventilate with BVM gently with cricoid pressure applied for 3-5 minutes if situation allows.

2. Administer **Versed 5mg IV/IO then:**

3. Administer **Ketamine 1-2 mg/kg IV/IO**. May repeat as necessary, titrate to effect. Be prepared to suction as sectretions may increase in some patients.

4. Perform endotracheal intubation. Discontinue attempt and ventilate with 100% O2 if:
   a. 30 seconds had elapsed and SpO2 falls below 91%
   b. Heart rate falls below 60BPM.

# Drug Assisted Intubation Cont'd (ALS Only)

5. When successfully intubated, confirm placement by:
   a. bilateral breath sounds
   b. silent epigastrum
   c. good chest rise and fall
   d. End tidal CO2 monitoring and capnography.
   e. condensation in ETT

6. Secure the ETT with a commercial tube holder.

7. If the intubated patient becomes agitated, administer **Versed 1mg IV/IO push every 1-2 minutes** until the patient is calm or a total of 10mg has been administered. Further medication orders may be given by medical control.

8. If intubation is unsuccessful, maintain cricoid pressure and provide ventilations by BVM. Consider the use of a King Airway™

# Central Lines and Ports Procedure & Protocol (ALS Only)

A pre-existing vascular access device is an indwelling catheter placed into a central vein to provide vascular access for those patients requiring long term intravenous therapy.

## Central Lines

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

1. **Should only be used if the patient is in cardiac arrest or in severe trauma cases if IO cannot be obtained.**

2. Do NOT administer benzodiazepines (i.e. Valium or Versed) via central line.

3. 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.

4. 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.

5. 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.

6. Do not remove the injection cap.

7. Do not allow IV fluids to run dry.

8. Always expel **all** air from syringes and IV tubing prior to administration.

9. Should damage occur to the external catheter, immediately clamp the catheter between the skin and the damaged area.

# Central Lines and Ports Procedure & Protocol Cont'd (ALS Only)

## Internal Medi-Ports

Access requires a specialized needle and may not be used by pre-hospital personnel unless appropriate training has been completed. Follow same procedure used to access central lines.

Medi-ports should only be accessed in EMERGENCY SITUATIONS.

**Critical Thinking Elements**

- **Patients with advanced renal disease requiring dialysis have special medical needs that may require specific attention in the prehospital setting. These patients are prone to complications such as fluid overload & electrolyte imbalances, especially if they miss a scheduled dialysis treatment.**
- **Fluid overload may lead to pulmonary edema.**
- **Hyperkalemia may lead to arrhythmias and cardiac arrest. Monitor dialysis patients closely.**
- ***Anastomosis* is the surgical connection of two tubular structures.**

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# Blood Glucose Testing Procedure

1. Prepare all necessary equipment.

2. Obtain a blood sample using a drop of venous blood from an IV site (**if** the brand of glucometer being used is calibrated to test venous blood).

**OR**

3. Cleanse the puncture site with an alcohol prep (try to avoid the patient's thumb and index finger).

4. Use a lancet device to puncture the skin and wipe away the 1st drop of blood with a 2x2 (or 4x4) gauze pad so excess alcohol does not dilute the sample.

5. Apply the drop of blood to the test site and wait for the meter to count down & display the result.

6. Discard the testing supplies in the appropriate biohazard containers.

7. For values < 60mg/dL and clinical presentation of hypoglycemia, the patient should receive Oral Glucose, Dextrose or Glucagon per protocol.

8. Blood glucose levels should be obtained before and within 5 minutes after the administration of Oral Glucose, Dextrose or Glucagon.

9. "Normal" range values for blood glucose results are 70-110mg/dL.

# Blood Glucose Testing Procedure

**Critical Thinking Elements**

- **An inaccurate test result may occur if there is an inadequate amount of blood on the testing strip, the test strip code number does not match the glucometer, use of expired test strips, dirty testing area, improper sequence of testing, failure to wipe away the 1st drop of blood and failure to perform quality controls / poor glucometer maintenance.**
- **Blood glucose testing is a tool to aid in the overall evaluation of your patient. Treatment should be based on clinical presentation of the patient and not solely on the basis of test results.**
- **Established infection control procedures should be followed when performing blood glucose testing (i.e. gloves).**
- **Glucometers should be tested (using quality control solution) at least once per week, any time a new bottle of strips is put into service and anytime the glucometer is dropped. The results should be documented on a *Glucometer Log* (or on the individual agency log). The log should be kept in a binder in the ambulance (or other vehicle) and made available upon request of EMS Office staff.**
- **Glucometer strips are sensitive to moisture in the air. Strips should always be stored in the original container with the desiccant intact. When removing strips from the container, take care to promptly remove the strip and immediately replace the cap tightly to prevent damaging the remaining strips.**

# ENVIRONMENTAL EMERGENCIES PROTOCOLS

# Hazardous Materials Exposure Protocol

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).

Harmful products are widely used in home gardening and cleaning, commercial agriculture and cleaning & industrial operations. Civil defense agencies have indicated the increasing threat concerning the use of *Weapons of Mass Destruction* (WMD) as a foreign and domestic terrorist tool. WMD represent an intentional hazardous materials incident.

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.

## FR/EMR

First Responder 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 *Routine Patient Care Protocol*.

2. Look for possible scene and patient contamination. Follow agency safety procedures.

3. **Proventil (Albuterol)**: 2.5mg in 3ml of normal saline via nebulizer over 6-8 minutes if the patient has been exposed to an irritant gas (acids, ammonia, chlorine, carbon monoxide). May repeat every as needed.

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.

# Hazardous Materials Exposure Protocol

## BLS

1. Continue FR/EMR care.

2. **Proventil (Albuterol)**: 2.5mg in 3ml of normal saline mixed with **Ipratropium (Atrovent)** 0.5mg via nebulizer 6-8 LPM O2 over 6-8 minutes 1 time only. May repeat **Proventil (Albuterol)**: 2.5mg in 3ml of normal saline via nebulizer 6-8 LPM O2 over 6-8 minutes as needed.

3. If patient's condition warrants, consider ALS intercept.

4. **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

1. Continue BLS care.

2. Look for possible scene and patient contamination. Follow agency safety procedures.

3. 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.

4. **Atropine**: 2mg IV/IM/IO if suspected organophosphate poisoning (OPP) and signs & symptoms of "SLUDGE" are present (salivation, lacrimation, urination, defecation, gastroenteritis and emesis). Early indications of OPP include: headache, dizziness, weakness & nausea. Repeat Atropine 2mg IV/IM/IO every ***5 minutes*** (**with Medical Control order**) or until signs & symptoms of "SLUDGE" subside.

5. Transport as soon as possible.

6. **Contact Medical Control** if needed 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.

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# Hypothermic Emergencies Protocol

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.

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.

## FR/EMR/BLS

BLS 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.

1. Render initial care in accordance with the *Routine Patient Care Protocol*.

2. Handle the patient as ***gently*** as possible.

3. 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.

4. Do not rub frostbitten or frozen body parts. Protect injured parts (e.g. blisters) with light, sterile dressings and avoid pressure to the area.

5. Check pulse for 45-60 seconds prior to start of CPR. Follow cardiac arrest protocol if necessary.

6. Treat other symptoms per the appropriate protocol.

7. Initiate ALS intercept if needed and transport as soon as possible.

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# Hypothermic Emergencies Protocol

## ILS/ALS

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. Continue FR/EMR/BLS care.

2. **IV Fluid Therapy**: 250ml fluid bolus of **warmed***(if possible*). Utilize antecubital space if possible. To maintain a B/P of 100mm/Hg

3. Treat other symptoms per the appropriate protocol.

4. Transport as soon as possible.

**Critical Thinking Elements**

- **Do not thaw frozen parts in the field if there is a chance of refreezing. Protect frostbitten areas from refreezing.**
- **Patients with hypothermia should be considered at high risk for ventricular fibrillation. It isimperative that these patients be handled gently and not re-warmed aggressively.**
- **The presence of delirium, bradycardia, hypotension and/or cyanosis is usually indicative of severe hypothermia (core body temperature of < 90 degrees Fahrenheit).**
- **According to AHA guidelines, if core temperature is <86 degrees F or 30 degrees C**
  - **Limit defibrillations to 3**
  - **Withhold all IV medications**
- **If the core temperature rises above 86 degrees F or 30 degrees C, resume normal protocols**

# Heat-Related Emergencies Protocol

Injury and illness from heat exposure varies depending on the *manner* of exposure (sun, humidity, exertion) and the *amount* of exposure (time, temperature & ambient air).

Heat exposure emergencies range from localized cramping to severe hyperthermia (heat stroke) with unresponsiveness and unconsciousness. The patient's health, predisposing factors and medications may increase the likelihood of heat-related illness and injury. The primary goal in the treatment of the patient at risk for hyperthermia is to cool the patient and restore body fluids.

## FR/EMR/BLS

BLS 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.

1. Render initial care in accordance with the *Routine Patient Care Protocol*.

2. 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 will cause them to shiver.

3. Treat other symptoms per the appropriate protocol.

4. If patient's condition warrants, consider ALS intercept.

# Heat-Related Emergencies Protocol

**ILS/ALS**

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. Continue FR/EMR/BLS care.

2. **IV Fluid Therapy**: 250ml fluid bolus if the patient is hypotensive to achieve a systolic BP of at least 100mmHg.

3. Transport as soon as possible.

## Heat Disorders

Heat (Muscle) Cramps– Heat cramps are muscle cramps caused by overexertion and dehydration in the presence of high temperatures. Signs & symptoms include: ***Normal or slightly elevated body temperature; generalized weakness; dizziness; warm, moist skin and cramps in the fingers, arms, legs or abdominal muscles.***

Heat Exhaustion – Heat exhaustion is an acute reaction to heat exposure and the most common heat-related illness a prehospital provider will encounter. Signs & symptoms include**:** ***Increased body temperature; generalized weakness; cool, diaphoretic skin; rapid, shallow breathing; weak pulse; diarrhea; anxiety; headache and possible loss of consciousness*** .

Heatstroke – Heatstroke occurs when the body's hypothalamic temperature regulation is lost. Cell death and damage to the brain, liver and kidneys can occur. Signs & symptoms include: ***Cessation of sweating; very high core body temperature; hot, usually dry skin; deep, rapid, shallow respirations (which later slow); rapid, full pulse (which later slows); hypotension; confusion, disorientation or unconsciousness and possible seizures.***

Fever (Pyrexia) – A fever is the elevation of the body temperature above the normal temperature for that person (~ 98.6$^{o}$ F +/- 2 degrees). Fever is sometimes difficult to differentiate from heatstroke; however, there is usually a history of infection or illness with a fever.

# Burn Protocol

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.

## FR/EMR/BLS

First Responder 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 Patient Care Protocol*.

2. Make sure the scene is safe to enter.

3. **THERMAL BURN TREATMENT**:

   **a)** Remove jewelry and loose clothing. Do not pull away clothing that is stuck to the burn.
   **b)** Cover the wound with dry sterile dressings.
   **c)** Place a burn sheet on the stretcher if the patient posterior is burned.
   **d)** Place patient on the stretcher.
   **e)** Cover the patient with additional burn sheets and blanket to conserve body heat.

# Burn Protocol

**FR/EMR/BLS (continued)**

4. **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.

5. **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**

1. Continue FR/EMR/BLS care.

2. Be prepared to intubate **early**if necessary.

3. **IV Fluid Therapy**: 250ml fluid bolus. Repeat if necessary.

4. **Morphine Sulfate** 2 – 5 mg slow IV as needed for pain if BP > 90 to a total of 10mg.

# Burn Protocol

**ILS/ALS Cont'd**

**5. Fentanyl:** 50mcg IV/IM/IN for pain if BP > 90. Fentanyl 50mcg may be repeated every ***5 minutes*** to a total dose of 200mcg.

**6. Zofran:** 4mg IV over 2 minutes for Nausea / Emesis.

**7.** Transport and receiving hospital as soon as possible.

**Critical Thinking Elements**

- **BurnJel® contains Lidocaine and may NOT be used in the 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.**
- **Closely monitor the patient's response to IV fluids and assess for pulmonary edema.**
- **Closely monitor the patient's airway – have BVM, suction and/or intubation equipment readily 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.**
- **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.**

# Smoke Inhalation Protocol

Smoke inhalation injury 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 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.

## FR/EMR

First Responder 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 Patient Care Protocol*.

## BLS/ILS/ALS

1. Continue FR/EMR care.

2. If patient's condition warrants, consider ALS intercept.

5. **Proventil (Albuterol)**: 2.5mg in 3ml of normal saline mixed with **Ipratropium (Atrovent)** 0.5mg via nebulizer 6-8 LPM O2 over 6-8 minutes 1 time only. May repeat **Proventil (Albuterol)**: 2.5mg in 3ml of normal saline via nebulizer 6-8 LPM O2 over 6-8 minutes as needed.

3. If respiratory distress with wheezing and stridor presents, consider CPAP

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

5. **ILS/ALS consider early intubation if necessary.**

**Critical Thinking Elements**

- **Consult with Medical Control regarding transportation of suspected CO poisoning patients. CO poisoning patients could benefit from treatment in a hyperbaric chamber.**
- **Monitor the patient's airway closely.**

# Drowning Protocol

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.

## FR/EMR/BLS

First Responder 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 Patient Care Protocol* and *Routine Trauma Care Protocol*.
2. Make sure the scene is safe. Use appropriate personnel and equipment for rescue.
3. Initiate ALS intercept and transport (BLS) as soon as possible.
4. Establish and maintain spinal immobilization.
5. Initiate **CPR** if indicated.
6. Treat respiratory and/or cardiac symptoms per the appropriate protocol. **BLS ONLY If respiratory distress with wheezing and stridor presents, consider CPAP.**

## ILS/ALS

1. Continue FR/EMR/BLS care.
2. Treat respiratory and/or cardiac symptoms per appropriate protocol.
3. Contact the receiving hospital as soon as possible.

**Critical Thinking Elements**

- **Refer to hypothermia protocol for cold water drownings.**

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# TRAUMA PROTOCOLS

# Routine Trauma Care Protocol

**FR/EMR/BLS/ILS/ALS**

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 (or intubate) if necessary.
        - **Needle Chest Decompression(ILS/ALS only)**: if patient is in severe respiratory distress or cardiac arrest with s/s of tension pneumothorax.

# Routine Trauma Care Protocol

**2. Primary Survey (Initial Assessment) (continued)**

- Assess circulation:
  - Evaluate carotid and radial pulses.
  - Evaluate skin color, temperature and condition.
  - Immediately control major external bleeding.

- 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.

**As a life or limb threat is found, manage accordingly.**

**3. Secondary Survey (Focused History & Physical Exam)**
*The secondary survey is a hear-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:

# Routine Trauma Care Protocol Cont'

- 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 intercostal 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, noting PMS before and after immobilization.

- 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)

# Routine Trauma Care Protocol

- Vital signs:
  - Blood pressure
  - Pulse
  - Respirations
  - Pulse Oximetry
  - Blood glucose (especially on altered LOC patients)

- History:
  - Obtain a SAMPLE history, and note any DCAP-BTLS-TIC if possible.
  - Signs & symptoms
  - Allergies
  - Medications
  - Past medical history
  - Last oral intake
  - Events of the incident

- **Interventions (en route)**
  - Cardiac monitor
  - 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 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.**
- **Trauma patients should be transported to the closest Trauma Center if within 25 minutes. Medical Control should be contacted immediately if there is ANY question as to which Trauma Center the patient should be transported to.**

# Shock (Trauma/Hemorrhage) Protocol

Common signs and symptoms of shock include:

- Confusion
- Restlessness
- Combativeness
- ALOC
- Pallor
- Diaphoresis
- Tachycardia
- Tachypnea
- Hypotension

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 treatment should be minimal. Conduct a *Primary Survey*, manage the airway, take C-spine precautions & immobilize and control any life-threatening hemorrhage. Contact receiving hospital as early as possible.

# Shock (Trauma/Hemorrhage) Protocol

## FR/EMR/BLS

First Responder 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. Follow *Routine Trauma Care Protocol.*
2. Control bleeding using direct pressure, pressure dressings and pressure points. Splint other injuries if you have time before transport vehicle arrives.
3. Initiate ALS intercept and transport as soon as possible.
4. Contact Medical Control as soon as possible

## ILS/ALS

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 Patient Care Protocol* and *Routine Trauma Care Protocol*.
2. Control bleeding using direct pressure, pressure dressings and pressure points.
3. **IV Fluid Therapy**: Establish 2 large bore IV's or single I/O of Normal Saline; infuse at a rate to maintain a systolic B/P of 90 mm/Hg unless a brain injury is suspected then B/P should be 110 mm/Hg.
4. Transport as soon as possible.
5. **Contact Medical Control** as soon as possible.

**Critical Thinking Elements**

- **Hypotension may not occur in the early stages of shock. However, aggressive therapy is indicated if there is a significant mechanism of injury and/or shock is suspected.**
- **IV access should be obtained en route and should not delay transport time.**
- **IV fluid bolus/flow rate should be regulated and patient response to fluid monitored closely.**
- **If intubation is required, intubate using in-line stabilization of the C-spine.**

# Traumatic Arrest Protocol

Resuscitation success rates of trauma patients in cardiac arrest are extremely poor, usually due to prolonged hypoxia. Efforts to resuscitate are more likely to be successful if EMS arrives early in the arrest, understands the differences between traumatic cardiac arrest patients & medical cardiac arrest patients and treatment is directed at identifying & treating the underlying cause. Traumatic arrest is usually caused by airway problems (unmanaged airway during unconsciousness), breathing problems (from chest trauma) and/or circulatory problems (internal or external hemorrhaging).

Patients who are found in **asystole** after massive blunt trauma or penetrating trauma of a vital organ are dead and may be pronounced dead on scene with the concurrence of Medical Control.

**FR/EMR/BLS/ILS/ALS**

1. Rapidly assess to determine possible causes of the arrest and determine if resuscitation will be attempted.
2. Initiate cardiac arrest protocols and procedures.
3. Rapidly extricate, fully immobilize and “Load & Go”.
4. Initiate ALS intercept.

# Critical Trauma Procedure

There are certain situations that require hospital / trauma center treatment within minutes if the victim is to have any chance for survival. The primary survey (initial assessment) is designed to identify these situations.

When these situations are recognized, the victim should be loaded immediately onto a backboard, transferred to the ambulance and transported promptly. Airway management, ventilatory support, control of **major** hemorrhaging and spinal immobilization are the only procedures that should be managed prior to transport. Other lifesaving procedures should be done en route. Procedures such as splinting and bandaging must not delay transport.

## Potential Life Threatening Conditions

1. Head injury with a decreasing LOC, unresponsiveness or unequal pupils
2. GCS $\leq$ 10
3. Airway obstruction that cannot be quickly relieved by mechanical methods such as suction, Magill forceps or intubation
4. Large open chest wound (sucking chest wound)
5. Large flail chest
6. Tension pneumothorax
7. Major blunt chest trauma
8. Laryngotracheal fracture
9. Traumatic cardiac arrest
10. Shock
11. Tender, distended abdomen
12. Pelvic instability
13. Bilateral femur fractures
14. Penetrating trauma of the head, neck, torso or groin
15. Ejection from a vehicle
16. Amputation above the wrist or ankle
17. Trauma combined with $\geq$ 20% TBSA Burn
18. Falls > 20 feet
19. Pregnancy $\geq$ 24 weeks

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# Critical Trauma Procedure

## Section 515.APPENDIX C Minimum Trauma Field Triage Criteria

SUSTAINED HYPOTENSION – BP ≤ 90 SYSTOLIC (PEDS ≤ 80 SYSTOLIC) ON TWO CONSECUTIVE MEASUREMENTS FIVE MINUTES APART

YES → MANDATORY NOTIFICATION OF THE TRAUMA SURGEION FROM THE FIELD

↓NO

Category I
**Blunt or Penetrating Trauma with Unstable Vital Signs and/or:**

- Hemodynamic compromise as evidenced by:
  - BP ≤ 90 Systolic
  - Peds BP ≤ 80 Systolic
- Respiratory compromise as evidenced by:
  - Respiratory rate <10 or >29
- Altered mentation as evidenced by:
  - Glasgow Coma Scale ≤10

**Anatomical Injury**

- Penetrating injury of head, neck, torso or groin
- Two or more body regions with potential life or limb threat
- Combination trauma with ≥ 20% TBA Burn
- Amputation above wrist or ankle
- Limb paralysis and/or sensory deficit above the wrist and ankle
- Flail chest

YES → INITIATE *FIELD TRAUMA TREATMENT PROTOCOLS*

RAPID TRANSPORT TO TRAUMA CENTER**

↓NO

Category II
**Mechanism of Injury**

- Ejection from motor vehicle
- Death in same passenger compartment
- Falls > 20 feet

YES → INITIATE *FIELD TRAUMA TREATMENT PROTOCOLS*

RAPID TRANSPORT TO TRAUMA CENTER**

↓NO

INITIATE *FIELD TRAUMA TREATMENT PROTOCOLS* AND TRANSPORT TO THE CLOSEST HOSPITAL.

# Critical Trauma Procedure

**Section 515.APPENDIX C Minimum Trauma Field Triage Criteria (continued)**

**> 25 minutes from Trauma Center, transport to nearest participating trauma hospital.**

**> 30 minutes from Trauma Center or participating trauma hospital, transport to nearest hospital.**

**> 45 minutes from Trauma Center or participating trauma hospital in a rural area where there is no comprehensive emergency department available, transport to the nearest hospital.**

# Extremity Injury Protocol

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

**FR/EMR/BLS/ILS/ALS**

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

1. Render initial care in accordance with the *Routine Patient Care Protocol*.

2. 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.
   - **e.** As LAST RESORT use tourniquet.

3. 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.

# Extremity Injury Protocol

**FR/EMR/BLS/ILS/ALS cont'd**

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.

**ILS/ALS**

1. **IV Fluid Therapy**: Fluid bolus if the patient is hypotensive to obtain a systolic BP of at least 100mmHg.

2. **Morphine Sulfate 2 – 5 mg slow IV as needed for pain control. or**

3. **Fentanyl:** 50mcg IV/IM/IN for pain if BP > 90. Fentanyl 50mcg may be repeated every ***5 minutes*** to a total dose of 200mcg.

4. **Zofran:** 4 mg slow over 2 minutes IV for Nausea / Emesis.

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

**GALESBURG COTTAGE EMS SYSTEM**
**PREHOSPITAL CARE MANUAL**

# Spinal Motion Restriction Protocol

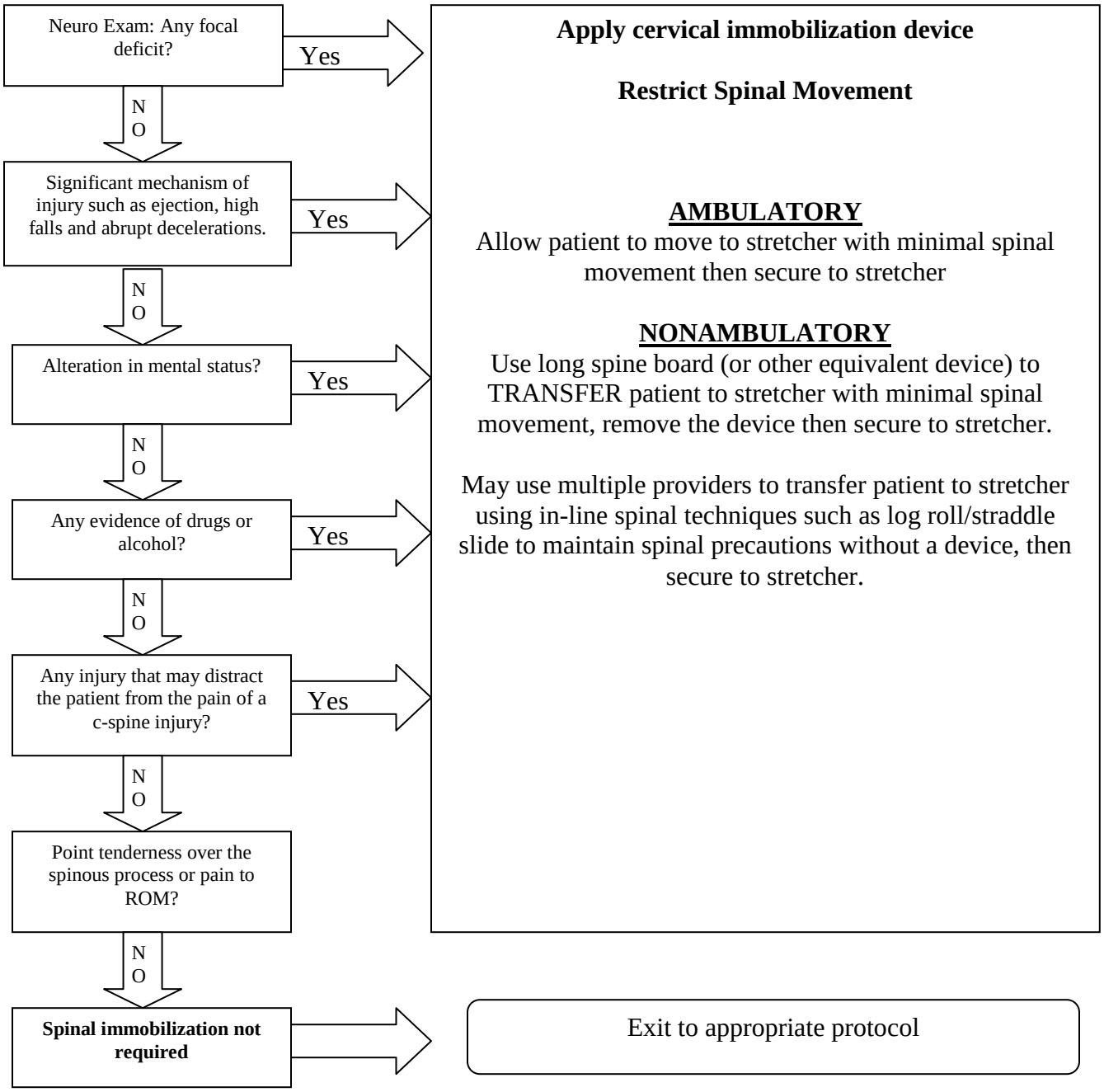
**FR/EMR/BLS/ILS/ALS**

1. All trauma patients with mechanism of injury compatible with potential spinal injury.
    a. Do not delay on scene time to assess clearing the spine. All multi-system trauma patients should receive full immobilization.
2. Spinal clearance criteria
    a. Level of consciousness
        i. Less than 15 GCS: **c-collar.**
        ii. GCS of 15 go on to b.
    b. Intoxication
        i. Patient admits to, or signs and symptoms of alcohol or mind altering drug use: **c-collar.**
        ii. Patient admits to no alcohol or mind altering drug use, go to c.
    c. Distracting injury
        i. Patient suffers distracting injury: **c-collar.**
        ii. Patient has no distracting injury, go to d.
    d. Complaint of neck and/or spine pain
        i. Yes; **c-collar.**
        ii. If no, go to e.
    e. Spine pain on palpation or movement
        i. Yes; **c-collar.**
        ii. No; do not immobilize.

Refer to next page

# Spinal Motion Restriction Protocol

**FR/EMR/BLS/ILS/ALS**



# Spinal Motion Restriction Protocol

**Critical Thinking Elements**

- **Recommended exam: Mental status, skin, neck, heart, lungs, abdomen, neck, extremities, neuro.**
- **Patients meeting all of the above criteria do not require spinal motion restriction, however patients who fail one or more criteria require spinal motion restriction but do NOT always require use of a long spine board.**
- **Long spine boards are NOT considered standard of care in most cases of potential spinal injury. Spinal motion restriction with cervical collar and securing patient to cot while padding all voided areas is appropriate in most cases.**
- **Spinal motion restriction is always utilized in at risk patients. These include cervical collar, securing to stretcher, minimal movement/transfers and maintenance of in-line spine stabilization during any necessary movement/transfers. This includes the elderly or others with body or spine habitus preventing them from lying flat.**
- **Consider spinal motion restriction in patients with arthritis, cancer, dialysis, underlying spine (spinal surgery) or bone disease.**
- **Range of motion (ROM) is tested by touching chin to chest (look down), extending neck (look up), and turning head from side to side (shoulder to shloulder) without posterior cervical mid-line pain. ROM should not be assessed if patient has midline spinal tenderness. Patients ROM should not be assisted.**
- **Immobilization on a long spine board is not necessary where:**
  - **Penetrating trauim to the head, neck or torso with no signs/symptoms of spinal injury**
- **Concerning mechanisms that may result in spinal column injury:**
  - **Fall from ≥ 3 feet and/or ≥ 5 stairs or steps**
  - **MVC ≥ 30mph, rollover and/or ejection**
  - **Motorcycle, bicycle or other mobile device or pedestrian-vehicle crash**
  - **Diving or axial load to spine**
  - **Electric shock**

# Spinal Immobilization Procedure

Any type of patient manipulation may be dangerous during the care of a suspected spinal injury patient. Spinal injury should be suspected in all patients presenting with:

- Head, neck or facial trauma (i.e. injury above the clavicles)
- ALOC with unknown history of events
- Complaints of neck or back pain unrelated to the patient's medical history
- Complaint of head pain related to trauma
- Physical findings suggesting neck or back pain
- Unknown mechanism of injury
- High mechanism of injury despite complaints
- Suspected deceleration injuries

## General Spinal Management

1. Routine trauma care.

2. Immediately establish manual stabilization of the cervical spine.
   a. Approach the patient in a manner that prevents the patient from moving his/her head & neck to see you or answer your questions.
   b. Stabilize the patient's head & neck in a neutral in-line position by grasping the patient's head along the lateral aspects (and perform a modified jaw thrust if indicated).

3. Apply a rigid C-collar after airway, breathing and circulatory status have been assessed.

4. Log-roll the patient onto a long backboard. Assess and document neurovascular status *before and after* immobilization.

5. Secure the patient's torso and extremities to the backboard using spider straps or belts.

6. Reassess (perform ongoing assessment).

# Spinal Immobilization Procedure

## Spinal Management of Patients in a Sitting Position

1. Patients found in a sitting position that have a suspected spinal injury should be secured to an extrication device (i.e. KED) prior to being moved.

2. Patients who meet "Load & Go" criteria should be moved using the rapid extrication technique. Proper manual stabilization must be maintained throughout the extrication.
   - **a.** Secure neutral, in-line stabilization of the head & neck (as per *General Spinal Management*).
   - **b.** Keeping the patient's spine in a neutral position, pivot the patient in order to place a long backboard under the patient's buttocks and behind his/her back.
   - **c.** Lower the patient to the long backboard and secure (as per *General Spinal Management*).

# Needle Thoracentesis (Needle Chest Decompression) Procedure

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 *Routine 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 will with a dressing and tape.
7. Monitor the patient **closely** and continue to reassess.

**Critical Thinking Elements**

- **Nerve bundles and blood vessels are located under the ribs and puncturing them could cause nerve damage and extensive bleeding. Ensure that the puncture is being made over the <u>top</u> of the 3rd rib.**

# OB/GYN PROTOCOLS

# Childbirth Protocol

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.

**FR/EMR/BLS/ILS/ALS**

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 *Routine Patient Care Protocol*.

2. 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)

3. Allow the expectant mother to remain in a position that is most comfortable.

4. If delivery is not imminent, transport the patient on her left side.

5. 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.

6. 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.

# Childbirth Protocol

**FR/EMR/BLS/ILS/ALS**

7. **(ILS&ALS) IV Fluid Therapy:** 250ml fluid bolus if the patient is hypotensive to obtain a systolic BP of at least 100mmHg.

8. 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% $O_2$ at 30-40 vpm.
   - If no brachial pulse is present **OR** the pulse is < 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.

# Childbirth Protocol

## Infant Post Partum Care (continued)

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.

## Post Partum Care of 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.*

# Childbirth Protocol

## Documentation Requirements

1. Completed *Emergency Childbirth Record*
2. Document the date, time and place of delivery
3. 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.*
4. Appearance of the amniotic fluid
5. Time the placenta was delivered and its condition
6. APGAR score at ***1 minute*** and ***5 minutes***
7. Any resuscitation / treatment rendered and newborn response to treatment

## High-Risk Pregnancy Factors

- Lack of prenatal care
- Drug abuse
- Teenage pregnancy
- Diabetes
- Hypertension
- Cardiac disease
- Previous breech or C-section delivery
- Pre-eclampsia / Toxemia / Eclampsia
- Twins / Multiple birth pregnancy

**GALESBURG COTTAGE EMS SYSTEM**
**PREHOSPITAL CARE MANUAL**

## Emergency Childbirth Record

**(Complete and attach to the newborn patient care record)**

**1.** Presentation (head or feet): _____

**2.** Date of Birth: _____

**3.** Time of Birth (*military time*): _____

**4.** Nuchal Cord: **YES** **NO** # of times cord wrapped around neck: _____

**5.** Time membranes ruptured (*military time*): _____

**6.** Appearance of amniotic fluid: **CLEAR (Cloudy)** **MECONIUM** **BLOOD-TINGED**

**7.** **APGAR Score:** Must be completed at ***1 minute*** and again at ***5 minutes***.

| *Element* | *0* | *1* | *2* | *1 minute Score* | *5 minute Score* |
|---|---|---|---|---|---|
| Appearance (Color) | Body and extremities blue, pale | Body pink, extremities blue | Completely pink | | |
| Pulse rate | Absent | < 100 bpm | > 100 bpm | | |
| Grimace (Irritability) | No response | Grimace | Cough, sneeze, cry | | |
| Activity (Muscle tone) | Limp | Some flexion of extremities | Active motion | | |
| Respirations | Absent | Slow and irregular | Strong cry | | |
| TOTAL SCORE: | | | | | |

**8.** Time placenta delivered (*military time*): _____ **INTACT** **NOT INTACT**

**9.** Number of vessels in cord: _____

**10.** Infant resuscitation: **STIMULATION only** **OXYGEN** **$O_2$ with BVM**

- **CPR** **Time CPR began: _____** **Time CPR terminated: _____**

**11.** Remarks: _____
_____
_____

**12.** Signature & ID# of Paramedic/EMT: **1. _____** **2. _____**

# Childbirth Protocol

**Critical Thinking Elements**

- **Lower than normal blood pressure and higher than usual heart rate are normal vital sign changes with pregnancy.**
- **Signs & symptoms of shock in the pregnant patient include a systolic BP < 90mmHg, lightheadedness and ALOC.**
- **Average labor lasts 8-12 hours but can be as short as 5 minutes.**
- **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 / Toxemia. Monitor patient closely and watch for seizure activity.**
- **Green or brown amniotic fluid indicates the presence of Meconium (fetal stool) and should be reported immediately to the receiving facility staff.**

# Obstetrical Complications Protocol

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.

**FR/EMR/BLS/ILS/ALS**

## General Guidelines

1. Render initial care in accordance with the *Routine Patient Care Protocol*.

## Placenta Previa

*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.

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:** 250ml fluid bolus if the patient is hypotensive to obtain a systolic BP of at least 100mmHg.
5. **Contact receiving hospital** as soon as possible.

# Obstetrical Complications Protocol

**FR/EMR/BLS/ILS/ALS**

## Abruptio Placentae

*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 anddevelopment 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. (**BLS**) Initiate ALS intercept.
5. **(ILS&ALS) IV Fluid Therapy:** 250ml fluid bolus if the patient is hypotensive to obtain a systolic BP of at least 100mmHg.
6. Establish a 2nd IV en route if time permits.
7. **Contact receiving hospital** as soon as possible.

# Obstetrical Complications Protocol

**FR/EMR/BLS/ILS/ALS**

## 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 (160/110 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.

# Obstetrical Complications Protocol

## Pre-Eclampsia and Eclampsia (continued)

6. **(ILS &ALS) Versed:** 2mg over 1 minute for seizure activity. May repeat 2mg IV ***every 5*** minutes to a total dose of 10mg. **Versed** intra nasal may be used if unable to establish IV.

7. **Contact receiving** hospital 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:** 250ml fluid bolus if the patient is hypotensive to obtain a systolic BP of at least 100mmHg.

5. **Contact receiving hospital** as soon as possible.

# Abnormal Delivery Protocol

**FR/EMR/BLS/ILS/ALS**

Abnormal delivery situations can be especially challenging in the pre-hospital setting. Care should be focused on initiating *Routine Patient Care* to treat for shock and rapid/safe transport to the hospital.

## 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 *Routine Patient Care Protocol*.
2. Load and transport as soon as possible.
3. **(BLS &ILS)** Initiate ALS intercept.
4. Never attempt to pull the baby from the vagina by the trunk or legs.
5. As soon as the legs are delivered, support the baby's body (wrapped in a towel).
6. After the shoulders are delivered, gently elevate the trunk and legs to aid in the delivery of the head.
7. 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.
8. **Contact receiving hospital** as soon as possible.

# Abnormal Delivery Protocol

**FR/EMR/BLS/ILS/ALS**

## Prolapsed Cord

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.

1. Render initial care in accordance with the *Routine Patient Care Protocol*.
2. **(BLS &ILS)** Initiate ALS intercept.
3. Elevate the mother's hips.
4. **Do not pull on the cord and do not attempt to push the cord back into the vagina**.
5. 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.
6. Palpate the cord for pulsations.
7. Keep the exposed cord warm and moist.
8. Keep the hand in position and transport immediately.
9. **Contact receiving hospital** as soon as possible.

# Abnormal Delivery Protocol

**FR/EMR/BLS/ILS/ALS**

## Limb Presentation

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 *Routine Patient Care Protocol*.
2. **(BLS &ILS)** Initiate ALS intercept.
3. Elevate the mother's hips.
4. Avoid touching the limb (doing so may stimulate the infant to gasp).
5. **Do not pull on the extremity and do not attempt to push the limb back into the vagina**.
6. **Contact receiving hospital** as soon as possible.

# Rape/Sexual Assault Protocol

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.

**FR/EMR/BLS/ILS/ALS**

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.

1. Render initial care in accordance with the *Routine Patient Care Protocol*.

2. Treat injuries according to the appropriate protocol.

3. Survey the scene and give special consideration to preserving any articles of evidence on or around the patient.

    - 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.

4. Transport the patient and notify law enforcement of patient destination.

# Rape/Sexual Assault Protocol

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.

## Date Rape Drugs

*Rohypnol*– A potent benzodiazepine that produces a sedative effect, amnesia, muscle relaxation and slowing of psychomotor response. It is colorless, odorless & tasteless and can be dissolved in a drink without being detected. Street names include: *Ruffies, R2, Roofies, Forget-Pill* and *Roche*.

*GHB* – An odorless, colorless liquid depressant with anesthetic-type qualities. It causes relaxation, tranquility, sensuality and loss of inhibitions. Street names include: *Liquid Ecstasy and Liquid X.*

*Ketamine*– A potent anesthetic agent that is chemically similar to LSD. It causes hallucinations, amnesia and dissociation. Street names include: *K, Special K, Jet* and *Super Acid.*

*Ecstasy* – Causes psychological difficulties including confusion, depression, sleep problems, severe anxiety and paranoia. It can also cause physical symptoms including muscle tension, involuntary teeth clenching, nausea, blurred vision, faintness, chills and sweating. Street names include: *Beans, Adam, XTC, Roll, E* and *M.*

**Critical Thinking Elements**

- **Carefully and objectively document all of your findings including a thorough description of how & where the patient was found, all injuries/assessment findings and patient history.**
- **If a patient refuses treatment, refer to the *Patient Right of Refusal Policy*.**
- **Request local law enforcement if they have not already been called to the scene.**

# ABERRANT SITUATIONS

# Domestic Abuse and Elder Abuse/Neglect Protocol

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.

**FR/EMR/BLS/ILS/ALS**

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.

1. Render initial care in accordance with the *Routine Patient Care Protocol*.

2. Maintain control of the scene and request law enforcement if they have not already been called.

3. Survey the scene for evidence of factors that could adversely affect the patient's welfare:

    - Environmental
    - Interaction with family members
    - Discrepancies in history of events
    - Injury patterns that do not correlate with the history of patient use and mobility
    - Signs of intentional injury or emotional harm

4. Treat injuries and/or illness according to protocol.

5. Initiate transport as soon as possible.

# Domestic Abuse and Elder Abuse/Neglect Protocol

## 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** |
| **Safe Harbor** | **(309) 343-7233** |
| **Crime Victims Compensation Program** | **(800) 228-3368** |
| **Alternatives for Older Adults (65 or older or 18-65 with disability)** | **(309) 277-0167** |

**Critical Thinking Elements**

- **If the offender is present and interferes with transportation of the patient (or is influencing the patient's acceptance of medical care), contact police and Medical Control for consultation on appropriate action.**
- **Upon arrival, notify the receiving physician or nurse of the suspected abuse. Illinois law mandates healthcare workers (including EMTs) report cases of suspected abuse or neglect.**
- **Thoroughly document all of your findings including a thorough description of how & where the patient was found, all injuries/assessment findings and patient history.**

# Behavioral Emergencies / Chemical Restraint Protocol

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.

## FR/EMR

First Responder 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 assuring personal safety.

1. Render initial care in accordance with the *Routine Patient Care Protocol*.
2. Maintain control of the scene and request law enforcement if needed.

## BLS Care

BLS 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 assuring personal safety and preparing the patient for or providing transport.

1. Continue FR care.
2. Maintain control of the scene and request law enforcement if needed.
3. Determine if the patient is a threat to self or others.
4. **Contact Medical Control** as early as possible if restraints are needed. An order for restraints is a must.
5. Initiate transport as soon as possible.

# Behavioral Emergencies / Chemical Restraint Protocol

## ILS/ALS

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

1. Continue FR/EMR/BLS care

2. If the patient is a threat to self or others, **restrain the patient (see restraint policy next page)** and **contact Medical Control as soon as possible**. An order for restraints is a must.

3. **Versed**: 2mg IV, 5mg IM or 10mg IN (1ml in each nare) for sedation if *absolutely necessary.* **Contact Medical Control** for further orders.

4. **Ketamine:** 5mg/kg IM or 2mg/kg IV. If IM administer only in lateral thigh. Dose may be repeated at ½ if needed. **ALS ONLY!!**

5. Initiate transport as soon as possible.

**Critical Thinking Elements**

- **Document the patient's behavior, statements, actions and surroundings.**
- **Stabilize situation by lowering stimuli including voice**
- **Assess and acknowledge crisis by validating patients feelings and not minimizing them**
- **Facilitate identification and activation of resources (clergy, family, friends, police)**
- **Encourage patient to use resources and take actions in his/her best interest.**
- **Recovery/referral – leave patient in care of a responsible person, professional or transport to appropriate medical facility. Do not leave the patient alone when EMS clears the scene.**
- **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.**
- **Consult Medical Control in ALL instances where a refusal of transport is being considered or the patient is to be restrained.**
- **Consider medical etiologies of apparent behavioral disorders such as hypoxia, stroke/head bleed, substance abuse/overdose, and hypoglycemia. Treat according to the appropriate protocol.**

# Patient Restraint Policy

Patients will only be restrained if clinically justified. The use of restraints is only 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 a minimum of 4 people.

2. **Contact Medical Control** as soon as possible for an order / guidance.

3. If available, may use police protective custody.

4. Explain the procedure to the patient (and family) if possible. The team leader should be the person communicating with the patient.

5. If attempts at verbally calming the patient have failed and the decision is made to use restraints, do not waste time bargaining with the patient.

6. Remember to remove any equipment from your person which can be used as a weapon against you (e.g. trauma shears).

7. Assess the patient and surroundings for potential weapons.

8. Approach the patient, keeping the team leader near the head to continue communications and at least one person on each side of the patient.

9. Move the patient to a backboard or the stretcher.

10. Place the patient **supine** and place **soft, disposable restraints** on 2-4 limbs and fasten to the backboard or stretcher. Spider straps may be used to assist in securing the patient. Avoid restraining the patient prone if at all possible.

11. Transport as soon as possible.

12. 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.**

13. Do not remove restraints until released by medical personnel at the receiving hospital.

# Do Not Resuscitate (DNR) Policy

A *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 EMT-B, EMT-I, EMT-P or PHRN who is actively participating in a Department approved EMS system may honor, follow and respect a valid DNR.

2. *DNR* refers to the withholding of life-sustaining treatment such as CPR, electrical therapy (e.g. pacing, cardioversion & defibrillation), endotracheal intubation and/or manually/mechanically assisted ventilation, unless otherwise stated on the DNR order.

3. By itself, a DNR order does not mean that any other life-prolonging therapy, hospitalization or use of EMS is to be withheld. Medical Control must be consulted in cases involving DNR orders.

4. A DNR order may be invalidated if the immediate cause of a respiratory or cardiac arrest is related to trauma or mechanical airway obstruction.

5. When EMS personnel arrive on scene and discover the patient is pulseless and breathless and CPR **is not** 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:
        - Decapitation
        - Rigor mortis **without** profound hypothermia
        - Dependent lividity
        - Obvious mortal wounds with no signs of life
        - Decomposition

    - Death has been declared by the patient's physician or the coroner.

# Do Not Resuscitate (DNR) Policy

- A valid DNR order 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.

- The EMS provider should immediately institute BLS measures and contact Medical Control for further direction if he or she has concerns regarding the validity of the DNR orders, the degree of life-sustaining treatment to be withheld or the status of the patient's condition.

**6.** When EMS personnel arrive on scene and discover that CPR **is** in progress, the EMS provider should:

- Assess breathing, pulse and analyze EKG activity.

- Determine if signs of death are present or a valid DNR exists. Continue resuscitation if signs of death are not obvious and a valid DNR is not available.

- **Contact Medical Control** for orders, including possible cease efforts order.

**7.** 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.

**8.** The only recognized DNR form EMS providers are obligated to honor, follow & respect is the standardized ***State of Illinois Do Not Resuscitate (DNR) Order*** 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.

# Do Not Resuscitate (DNR) Policy

**9.** Any other advanced directive or "living will" cannot be honored, followed & respected by prehospital 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 Medical Control.

**10.** 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. When a patient's surrogate decision-maker is present or has been contacted by prehospital personnel and they direct that resuscitative efforts not be instituted:

- The EMT is required to ask the *Durable Power of Attorney for Healthcare* agent to provide positive identification (i.e. driver's license, photo ID, etc.), see the document and ask the agent to point out the language that confirms that the "power" is in effect and that it covers the situation at hand (i.e. assure the scope of authority the *Durable Power of Attorney for Healthcare* has and that the patient's medical or mental condition complies with the document designating the *Durable Power of Attorney for Healthcare*).

- The *Durable Power of Attorney for Healthcare* agent or a surrogate decision-maker can provide consent to a DNR order, but the order itself must be written by a physician.

- An EMT cannot honor a verbal or written DNR request/order made directly by a *Durable Power of Attorney for Healthcare* agent, surrogate decision-maker or any person other than a physician. If such a situation is encountered, contact Medical Control for direction.

**11.** Revocation of a written DNR order is accomplished when the DNR order is physically destroyed or verbally rescinded by the physician who signed the order and/or the person who gave consent to the order.

**12.** 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.

# Do Not Resuscitate (DNR) Policy

**13.** 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.

**14.** If EMS personnel are transporting a patient with a valid DNR order to or from **home** and the patient arrests en route, contact Medical Control for orders. Do not initiate resuscitative measures unless otherwise directed by Medical Control.

**15.** If EMS personnel are transporting a patient with a valid DNR order during an **inter-hospital transfer** and the patient arrests en route, continue transport to the hospital and contact Medical Control for orders. Do not initiate resuscitative measures and contact Medical Control for orders.

**16.** If EMS personnel are transporting a patient with a valid DNR order from a **long-term care facility** and the patient arrests en route, continue transport and contact Medical Control. Do not initiate resuscitative measures and contact Medical Control for orders.

**17.** If EMS personnel arrive at the scene and the family states that the patient is a hospice patient with a valid DNR order, do not initiate resuscitative measures and contact Medical Control for orders.

**18.** On occasion, EMS personnel may encounter an out-of-town patient with a valid DNR order visiting in the EMS SYSTEM. If the DNR order appears to be valid (signed by the patient and physician), contact Medical Control for orders.

**19.** The coroner will be notified of any patient or family wishes that there is to be tissue donation in cases where the patient is not transported to the hospital.

**20.** The Medical Control physician's responsibility is to make reasonable effort to confirm the DNR order is valid and order resuscitative measures within the directives of the DNR order.

# Do Not Resuscitate (DNR) Policy

**21.** Appropriate patient care reports will be completed on all patients who are not resuscitated in the prehospital setting. A copy of the DNR form should be retained and attached as supporting documentation to the prehospital care report form.

**22.** All EMS SYSTEM personnel are to submit an incident report to the EMS Office regarding any difficulties experienced with DNR situations. These cases will be evaluated on an individual basis. Any issues identified will be reported to the EMS Medical Director for further review.

**23.** Follow the System's *Coroner Notification Policy*.

# Resuscitation vs. Cease Efforts Policy

The EMS provider is responsible to make every effort to preserve life. In the absence of an advanced directive, resuscitative measures shall be attempted if there is any chance that life exists.

When EMS personnel arrive on scene and discover the patient is pulseless and breathless and CPR **is not** 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:
  - Decapitation
  - Rigor mortis **without** profound hypothermia
  - Dependent lividity
  - Obvious mortal wounds with no signs of life
  - Decomposition

- Death has been declared by the patient's physician or the coroner.

- A valid DNR order 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.

- The EMS provider should immediately institute BLS measures and contact Medical Control for further direction if he or she has concerns regarding the validity of the DNR orders, the degree of life-sustaining treatment to be withheld or the status of the patient's condition.

When EMS personnel arrive on scene and discover that CPR **is** in progress, the EMS provider should:

- Assess breathing, pulse and analyze EKG activity.
- Determine if signs of death are present or a valid DNR exists. Continue resuscitation if signs of death are not obvious and a valid DNR is not available.
- **Contact Medical Control** for orders, including possible cease efforts order.

# Resuscitation vs. Cease Efforts Policy

A *cease efforts* order may be considered and the base station physician may order resuscitative efforts be discontinued (or not initiated at all) if the following conditions exist:

- No signs of life are present (i.e. pulseless & apneic), patient "down time" is unknown, EKG is **asystole** or **PEA**, and on-site resuscitative efforts have been unsuccessful.
- The patient has injuries inconsistent with life (even if the patient's body temperature is warm).
- Triage or patient prioritization deems resuscitative resources would be more beneficial for use on other victims.

**Critical Thinking Elements**

- **Pediatric patients and patient with hypothermia may have no signs of life but still be viable. Prolonged resuscitative efforts are indicated in these cases.**

**GALESBURG COTTAGE EMS SYSTEM**
**PREHOSPITAL CARE MANUAL**

# Coroner Notification Policy

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

1. Every law enforcement official, funeral director, **ambulance attendant**, 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. Any such person failing to notify the coroner promptly shall be guilty of a Class A misdemeanor, unless such person has reasonable cause to believe that the coroner had already been notified.

2. Deaths that are subject to coroner investigation include:

    - 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.

# Coroner Notification Policy

**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 / state lines with a patient that has been determined to be dead.**

7. If the EMS crew are in danger, the prehospital providers may move the body to a safe location. Prompt notification of the deceased patient's location must be conveyed to the coroner at once.

# Reporting and Control of Suspected Crime Scenes Policy

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.

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.

# Physician (or Other Medical Professional) On Scene Policy

Only personnel licensed to perform care in the prehospital setting and certified in the EMS SYSTEM are allowed to provide advanced patient care (e.g. intubation, IV access, medication administration, pacing, etc.) at 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 base station 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 distract or redirect the interfering person, 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, excuse them from the scene if their assistance is not needed. If assistance is needed, these personnel may provide assistance with the supervision of the agency having jurisdiction of the scene. EMS SYSTEM policies, procedures and protocols must be followed regardless of the assisting EMS personnel's authorized level of care.

# Region 2 School Bus Policy

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 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 <u>with no obvious mechanism of injury that could reasonably be expected to cause significant injuries</u>. *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.*

# Region 2 School Bus Policy

**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. On 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 will be requested to sign an individual refusal form.

9. EMS providers shall use reasonable means to contact the parents or school officials. This could include use of telephone, cellular phone or direct contact by law enforcement. If contacted by phone, EMS providers shall take reasonable means to confirm the identity and authority of the parent, legal guardian or school official.

# Region 2 School Bus Policy

**10.** 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.

**11.** 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.

**12.** Each prehospital provider agency in the 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.

**13.** Copies of documentation must be forwarded to the EMS Office (Quality Assurance Coordinator) for review within 24 hours of utilization of this policy.

# Region 2 School Bus Policy

**Insert *EMS Multiple Casualty Release Form* here**

# WELL-BEING OF THE EMS PROVIDER

# Infectious Disease Control Policy

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

## Protective Measures

1. Utilization of body substance isolation gear during all patient contacts is an effective means of avoiding exposure to body fluids. EMS personnel should don protective gear prior to entering a scene or situation that may increase the risk of exposure to body fluids or other 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.

## Exposure

1. 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.

2. 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 and the emergency department staff at the receiving hospital and following post exposure procedures.

# Infectious Disease Control Policy

## Post Exposure Management

After an exposure has occurred:

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. The emergency department staff will have the provider complete the appropriate paperwork. 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.

# Infectious Disease Control Policy

## Post Exposure Management (continued)

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

## Notification of Ambulance Personnel Exposed to Communicable Disease

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 include:
    - Acquired Immunodeficiency Syndrome (AIDS)*
    - AIDS-Related Complex (ARC)*
    - Anthrax
    - Chickenpox
    - Cholera
    - Diphtheria
    - Hepatitis B
    - Hepatitis non-A, non-B
    - Herpes simplex
    - Human Immunodeficiency Virus (HIV) infection*
    - Measles
    - Meningococcal infections
    - Mumps
    - Plague
    - 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.**

# Infectious Disease Control Policy

## Notification of Ambulance Personnel Exposed to Communicable Disease (continued)

**4.** When a hospital patient with a listed communicable disease is to be transported by ambulance personnel, the hospital staff sending the patient shall inform the ambulance personnel of any precautions to be taken to protect against exposure to disease. If a significant exposure occurs, the ambulance personnel shall immediately report the incident as indicated above.

**5.** The *Hospital Licensing Act* requires any information received in the notification process be handled in accordance with confidentiality policies and procedures.

**GALESBURG COTTAGE EMS SYSTEM**
**PREHOSPITAL CARE MANUAL**

## COMMUNICABLE DISEASE INCIDENT FORM

Exposed emergency personnel providing care:

□ Police □ Firefighter/First Responder □ EMT/Paramedic/PHRN

□ Other: _____

Name of EMS Provider Exposed: _____

Home Address: _____

City/State/Zip Code: _____

Home Phone #: _____ Cell Phone #: _____ Work Phone #: _____

Name of Agency: _____ Run #: _____

Name of Supervisor: _____Phone #: _____

Patient's Name: _____ Date/Time of Transport: _____

**Type of Significant Exposure** (Circle):

Parenteral (e.g. needle stick) Mucous membranes (e.g. eyes, mouth)

Significant skin exposure to blood, urine, saliva, bile, semen, vomit (e.g. open sores, cuts)

Other (explain): _____

Additional Comments:

_____
_____
_____

**Post Exposure Procedure**

1. Immediately notify your supervisor.
2. Notify the emergency department charge nurse when you arrive at the hospital with the patient.
3. Complete this form and make two (2) copies.
4. **Place the original in an envelope, seal and write "Attention Infection Control" on the front of the envelope.**
5. Give the sealed envelope to the emergency department charge nurse that the patient was transported to.
6. Provide your supervisor with a copy.
7. Forward a copy to the EMS Office within 24 hours.

# Latex Allergy Policy

A latex allergy is recognized as a significant problem for specific patients and healthcare workers. There are two (2) types:

- **Systemic** – Immediate reaction (within 15 minutes). Symptoms include generalized rash, wheezing, dyspnea, laryngeal edema, bronchospasm, tachycardia, angioedema, hypotension and cardiac arrest.

- **Delayed** – Delayed reaction (6 to 48 hours). Symptoms include contact dermatitis such as local itching, edema, erythema (redness), blisters, drying patches, crushing & thickening of the skin, and dermatitis that spreads beyond the skin initially exposed to the latex.

Persons at risk include patients with spina bifida, patients with urogenital abnormalities, workers with industrial exposures to latex, healthcare workers, persons with multiple surgeries, persons with frequent urinary procedures and persons with a history of predisposition to allergies.

## Suspected Latex Allergy

1. Assess for suspected latex sensitivity by asking the following:

   "*Do you react to rubber bands or balloons? Describe.*"

2. Initiate interventions for *Known Latex Sensitivity* if the latex sensitivity screen response suggests a latex hypersensitivity.

3. Notify the receiving hospital of suspected latex hypersensitivity.

4. Follow orders as per the *Allergic/Anaphylactic Reaction Protocol*.

# Latex Allergy Policy

## Known Latex Allergy

1. Obtain a patient history and ask the patient to describe their symptoms of latex hypersensitivity.

2. Monitor the following signs and symptoms:

    - Itching eyes
    - Feeling of faintness
    - Hypotension
    - Bronchospasm/Wheezing
    - Nausea/Vomiting
    - Abdominal cramping
    - Facial edema
    - Flushing
    - Urticaria
    - Shortness of breath
    - Generalized itching
    - Tachycardia
    - Feeling of impending doom

3. Notify the receiving hospital of known latex sensitivity.

4. Follow orders as per the *Allergic/Anaphylactic Reaction Protocol*.

5. Remove all loose latex items (e.g. gloves, tourniquets, etc.) and place in a closed compartment or exterior storage panel.

6. Utilize available latex-free supplies when preparing to care for or transport the latex-sensitive patient. The latex-free supplies must be on the ambulance (or other apparatus) and readily available.

7. Cover the mattress of the cot with a sheet so that no areas of the mattress are exposed.

8. DO NOT administer any medications through latex IV ports.

9. Wrap all tubing containing latex in kling before coming into contact with the patient (e.g. stethoscope tubing, BP cuff tubing, etc.).

# Substance Abuse Policy

The EMS SYSTEM considers substance abuse (drug either legal or illegal and/or alcohol dependency) to be a health problem and will assist any System provider who becomes dependent on drugs and/or alcohol. The System, and ultimately our patients, will suffer the adverse effects of having a prehospital care provider whose work performance and attendance are below acceptable standards. Any employee whose substance abuse problems jeopardize the safety of patients, co-workers or bystanders shall be deemed "unfit to work". Any prehospital care provider involved in the EMS SYSTEM who voluntarily requests assistance with a personal substance abuse problem will be referred to the EMS Medical Director for assessment and referral for treatment when necessary.

## Testing for Drugs & Alcohol

*The EMS SYSTEM does not require employees to submit to blood and/or urine testing for drugs and/or alcohol as a routine part of their employment physical examination. However, individual agencies may require testing as part of the application process.*

Any prehospital care provider may contact the EMS Medical Director (or his/her designee) if he/she has reasonable cause to suspect that a co-worker is under the influence of drugs and/or alcohol while on duty. The EMS Medical Director may choose to require the System provider to submit to a blood alcohol test and/or blood/urine toxicology screening. The cost of this testing procedure may be billed to the provider's agency, or in the case of a student, the requesting agency. Disputes related to billing of drug testing should not delay the procedure(s).

1. If a System provider who is required to submit to testing for drugs and/or alcohol refuses to cooperate, he/she will be subject to disciplinary action for insubordination (up to and including termination from the System). Refusal to test is equal to a positive drug screen.

2. Anyone caught adulterating or tampering with, or attempting to tamper or adulterating with his/her test specimen (or the specimen of any other prehospital care provider) will be subject to immediate termination from the System.

3. If any of the test results are positive, the EMS Medical Director will interview the provider. The EMS Medical Director will consult with the provider's agency to determine if referral to an assistance program shall occur.

# Substance Abuse Policy

## Testing for Drugs & Alcohol (continued)

- The **first** occurrence will result in a referral of the prehospital care provider to the appropriate assistance program and the provider will be subject to disciplinary action as determined by the EMS Medical Director in consultation with the provider's agency/employer.

- The **second** occurrence will result in disciplinary action as determined by the EMS Medical Director in consultation with the provider's agency/employer and may result in suspension of the provider's license and/or System certification.

- The progress of employees with substance abuse problems who have been referred to an assistance program will be closely monitored by their agency/employer and the EMS Medical Director. The provider must successfully complete the entire required rehabilitative program and maintain the preventative course of conduct prescribed by the assistance program. He/she must attend the appropriate after-care program(s) and provide verification of compliance with the program requirements, including additional drug testing as determined by the EMS Medical Director and the agency/employer.

**4.** If the test results are negative, a conference with the EMS Medical Director and the provider's agency/employer will be held to determine what future action, if any, will be taken.

**5.** If the prehospital care provider refuses to correct his/her health problems, he/she shall be subject to disciplinary action that pertains to all System providers who cannot, or are not, performing their job duties and responsibilities at acceptable levels.

The use, sale, purchase, transfer, theft or possession of an illegal drug is a violation of the law. *Illegal drug* means any drug which is (a) not legally obtainable or (b) legally obtainable but has not been legally obtained. The term *illegal drug* includes prescription drugs not legally obtained and prescription drugs legally obtained but not being used for prescribed purposes. Anyone in violation will be referred to law enforcement, licensing and/or credentialing agencies when appropriate.

# Critical Incident Stress Management (CISM) Team Procedure

There are certain emergencies that may have a lasting emotional effect on EMS personnel. These include emergencies involving children, co-worker, 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 EMS SYSTEM involved in an unusually stressful incident are encouraged to 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.

# VEHICLE SUPPLIES

# EMS Vehicle Equipment & Supplies Policy

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 *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 *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 *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 any change in AEDs or cardiac monitoring equipment as well as any changes in communications equipment that may affect Base Station communications.

INSERT IDPH NON-TRANSPORT VEHICLE INSPECTION FORM HERE

# First Responder/EMR Supply List

**(Use in conjunction with IDPH Non-Transport Vehicle Inspection Form)**

Glucometer
1 bottle of glucometer strips
10 alcohol preps
10 lancets (preferably safety lancets with a retracting needle)
1 bottle testing solution
Glucometer Log (minimum of 1 time/week testing)

1 bottle of Baby Aspirin 81mg
3 Oral Glucose 15g
1 small sharps container
5 Albuterol (Proventil) 2.5mg

# BLS Supply List

**(Use in conjunction with IDPH Non-Transport/transport Vehicle Inspection Form)**

**********

Glucometer
1 bottle of glucometer strips
10 alcohol preps
10 lancets (preferably safety lancets with a retracting needle)
1 bottle testing solution
Glucometer Log (minimum of 1 time/week testing)
2 nebulizer kits
2 adult nebulizer masks
5 Albuterol (Proventil) 2.5mg
5 Atrovent 0.5mg
Or
5 "duo neb" pre-mixed
1 bottle of Baby Aspirin 81mg
1 Epi-Pen auto-injector 0.3mg
or
Epinephrine 1;1,000 with 1cc syringe and needle (Adults only)
1 Epi Pen Jr auto injector 0.15mg
3 Oral Glucose 15g
1 bottle of Nitroglycerin (spray or tabs) 0.4mg
1 small sharps container
2 Nacan 2mg
2 nasal atomizers
Glucagon 1mg
CPAP device

INSERT IDPH AMBULANCE INSPECTION FORM HERE

# Additional ILS Equipment List

## Airway Kit

1 pair Magill forceps (ea.adult/peds)
1 Laryngoscope handle
1 (each size 1-4) Laryngoscope blade – straight
1 (each size 1-4) Laryngoscope blade – curved
1 (each size 6.0-9.0) Cuffed endotracheal tubes
1 (each size 2.5-5.5) Un-cuffed endotracheal tubes
Spare laryngoscope handle batteries
1 adult end-tidal $CO_2$ detector
1 pediatric end-tidal $CO_2$ detector
1 commercial ETT holder (ea. Adult/peds)
CPAP device

## IV Therapy Equipment – Drug Box

2 (each size 22g – 14g) IV catheters
2 saline locks
5 (2-3ml) pre-filled saline flushes
2 each (18, 21, 25g) hypodermic needles
10 alcohol preps
5 veniguards
2 (10gtts) IV tubing
2 (1000ml bags) .9% Normal Saline
10 non-sterile 2x2s and/or 4x4s
4 tourniquets
1 roll of tape

## IV Therapy Equipment – Vehicle

4 (each size 22g – 14g) IV catheters
2 saline locks
5 (2-3ml) saline flushes
2 each (18, 21, 25g) hypodermic needles
10 alcohol preps
10 veniguards
4 (10gtts) IV tubing
4 (1000ml bags) .9% Normal Saline
10 non-sterile 2x2s and/or 4x4s

Cardiac monitor/defibrillator w/ screen
and printing capabilities as well as pacing,
cardioversion & 12-Lead EKG capabilities

## Other Equipment

3 (1ml) syringes (in vehicle & drug box)
3 (3ml) syringes (in vehicle & drug box)
3 (10ml) syringes (in vehicle & drug box)
1 (30ml) syringe (vehicle)
1 (60ml) syringe (vehicle)

## Medications

(See chart – next page)

# Additional ILS Equipment List

## ILS Medications – *Minimum Requirements*

| Unit Stock | Medication | Supplied |
|---|---|---|
| **3** | **Adenocard (Adenosine)** | **6mg/2mL vial** |
| **5** | **Albuterol (Proventil)** | **2.5mg/3mL unit dose** |
| **1** | **Aspirin (ASA)** | **1 bottle – 81mg tablets** |
| **3** | **Atropine** | **1mg/10mL pre-filled syringe** |
| **2** | **Dextrose 50% (D50)** | **25g/50mL pre-filled syringe** |
| **6** | **Epinephrine 1:10,000** | **1mg/10mL pre-filled syringe** |
| **2** | **Epinephrine 1:1,000** | **1mg/1mL ampule** |
| **5** | **Atrovent (or duo neb pre-mix)** | **0.5mg unit dose** |
| **4** | **Lidocaine** | **100mg/5mL pre-filled syringe** |
| **2** | **Narcan (Naloxone)** | **2mg/1mL ampule** |
| **1** | **Nitroglycerin (NTG) Spray or tabs** | **1 bottle – 0.4mg metered dose** |
| **1** | **Epi-Pen Auto-injector** | **0.3mg pre-filled injector** |
| **3** | **Oral Glucose** | **15g tube** |
| *Controlled Substance Container* | | |
| **2** | Valium (Diazepam) | **10mg/2mL** |
| **2** | Versed (Midazolam) | **10mg/1mL** |
| **2** | Fentanyl | **100mcg/2ml** |
| **2** | Morphine | **10mg/1 ml** |

# Additional ALS Equipment List

## Airway Kit

1 pair adult Magill forceps
1 pair pediatric Magill forceps
1 large Laryngoscope handle
1 small (pediatric) Laryngoscope handle
1 (each size 1-4) Laryngoscope blade – straight
1 (each size 1-4) Laryngoscope blade – curved
1 (each size 6.0-9.0) Cuffed endotracheal tubes
1 (each size 2.5-5.5) Un-cuffed endotracheal tubes
Spare laryngoscope handle batteries
1 adult end-tidal $CO_2$ detector
1 pediatric end-tidal $CO_2$ detector
1 commercial adult ETT holder
1 commercial pediatric ETT holder
1 adapter for ETT Albuterol administration
1 pediatric nebulizer mask
CPAP device

## IV Therapy Equipment – Drug Box

2 (each size 22g – 14g) IV catheters
2 saline locks
5 (2-3ml) pre-filled saline flushes
1 tubex syringe
2 each (18, 21, 25g) hypodermic needles
10 alcohol preps
5 veniguards
2 (10gtts) IV tubing
2 (1000ml bags) .9% Normal Saline
1 (60gtts) IV tubing
10 non-sterile 2x2s and/or 4x4s
4 tourniquets
1 roll of tape

## IV Therapy Equipment – Vehicle

4 (each size 22g – 14g) IV catheters
2 saline locks
5 (2-3ml) saline flushes
1 tubex syringe
2 each (18, 21, 25g) hypodermic needles
10 alcohol preps
10 veniguards
4 (10gtts) IV tubing
4 (1000ml bags) .9% Normal Saline
1(250ml bag) D5W
1 (60 gtts) IV tubing
10 non-sterile 2x2s and/or 4x4s

## Monitoring Equipment

Cardiac monitor/defibrillator w/ screen
and printing capabilities as well as pacing,
cardioversion & 12-Lead EKG capabilities

## Other Equipment

3 (1ml) syringes (in vehicle & drug box)
3 (3ml) syringes (in vehicle & drug box)
3 (10ml) syringes (in vehicle & drug box)
1 (30ml) syringe (vehicle)
1 (60ml) syringe (vehicle)
1 chest decompression kit with
valve device (drug box)
1 optional EZ-IO

# Additional ALS Equipment List

| Unit Stock | Medication | Supplied |
|---|---|---|
| **3** | **Adenocard (Adenosine)** | **6mg/2mL vial** |
| **2** | **Albuterol (Proventil)** | **2.5mg/3mL unit dose** |
| **2** | **Atrovent (or duo neb pre-mix)** | **0.5mg unit dose** |
| **1** | **Aspirin (ASA)** | **1 bottle – 81mg tablets** |
| **3** | **Atropine** | **1mg/10mL pre-filled syringe** |
| **1** | **Benadryl (Diphenhydramine)** | **50mg/1mL pre-filled syringe** |
| **2** | **Dextrose 50% (D50)** | **25g/50mL pre-filled syringe** |
| **2** | **Epinephrine 1:1000** | **1mg/1mL ampule** |
| **6** | **Epinephrine 1:10,000** | **1mg/10mL pre-filled syringe** |
| **1** | **Glucagon** | **1mg** |
| **3** | **Amiodarone** | **150mg** |
| **1** | **Solu-Medrol** | **125mg** |
| **1** | **Lidocaine** | **100mg/5mL pre-filled syringe** |
| **2** | **Narcan (Naloxone)** | **2mg/1mL ampule** |
| **1** | **Nitroglycerin (NTG) Spray or tabs** | **1 bottle – 0.4mg metered dose** |
| **2** | **Zofran (IV/ODT)** | **4 mg** |
| **2** | **Sodium Bicarbonate** | **50 mEq/50mL pre-filled syringe** |
| *Controlled Substance Container* | | |
| **2** | **Fentanyl** | **100mcg/2mL** |
| **1** | **Morphine Sulfate** | **10mg/1 ml** |
| **1** | **Valium** | **10mg/2ml** |
| **2** | **Versed** | **10mg/2ml** |
| **2** | **Ketamine** | **50mg/1ml** |

# Controlled Substance Policy

Follow your organization's system approved controlled substance policy in accordance with the system plan.

## Waste Procedure

If restocking controlled substances from Cottage Hospital; Any amount of a controlled substance remaining after administration of the substance to a patient, shall be placed in a zip top bag, labeled with the medication, date, time, patient name and crew members. This bag shall be placed in waste bin' at your facility. (**do not waste in sink**) Wasted drugs will be picked up and taken to Galesburg Cottage Hospital by the EMS system coordinator for inspection. If restocking from another hospital, follow that hospital or your agency's controlled substance policy.

## Expanded Scope
## Medications

EMT-P, PHRN

1. Routine medical / cardiac / trauma care as appropriate.
2. Maintain patent airway.
3. Transport in position of comfort if appropriate.
4. Obtain baseline vital signs prior to beginning transport.
5. Continue monitoring as directed by transferring facility personnel / physician.
6. Maintain / administer medications during transport as directed by transferring facility personnel / physician.
7. If a new medication, get inservice from MD or RN on medication including dosing, indications, contraindications, adverse reactions and procedure if patient has an adverse reaction.
8. Repeat and document vital signs:

a. Every 30 minutes for stable patients.
b. Every 5 minutes for stable patients with changing conditions.
c. Every 5 minutes until stable for patients requiring medication titration.

**GALESBURG COTTAGE EMS SYSTEM**
**PREHOSPITAL CARE MANUAL**

**Critical Care**
**Routine Inter-Facility Transfer Care**

Inter-Facility Transfer of Patients Receiving IV **Potassium Chloride (KCL)**

EMT-P, ECRN

i. Routine Inter-facility transfer care.
ii. Continue infusion at rate prescribed by referring physician.
    1. KCL may be infused via peripheral or central line.
    2. Preferred maximum concentration is 80 mEq / 1000ml.
    3. The KCL drip shall be on an infusion pump.
    4. Referring physician may exceed the recommended concentration and / or drip rate, but the following limits apply:
        a. No concentration greater than 20 mEq / 100 ml.
        b. Rate not to exceed 10 mEq / hour or 30 mEq / 3 hours.
iii. If cardiac dysrhythmias or heart block develop:
    1. Discontinue the infusion
    2. Refer to appropriate standing medical order for treatment of dysrhythmia.
    3. Establish medical control contact
    4. Advise medial control of patient condition
    5. Institute orders as directed by medical control physician.

**Critical Care**
Routine Inter-Facility Transfer Care

Inter-Facility Transfer of Patients Receiving IV **Nitroglycerin (Tridil)**

EMT-P, ECRN

i. Routine inter-facility transfer care.
*ii.* Continue infusion at rate prescribed by referring physician.
    *1.* An infusion pump will be utilized to control the rate.
    *2.* Tridil requires a separate site for infusion. It should not be administered with any other medications.
*iii.* If chest pain develops:
    *1.* Increase the infusion rate by 5 mcg / minute if not hypotensive.
    *2.* May be repeated for a total of three (3) times, every 3 – 5 minutes if not hypotensive.
    *3.* Monitor vital signs every 5 minutes when titrating Tridil rate.
    *4.* If chest pain persists after 3 increases in dosage, establish contact with medical control.
    *5.* Advise medical control of patient's condition.
    *6.* Institute orders as directed.
*iv.* If hypotension develops:
    *1.* The effects of IV Tridil are transient.
    *2.* Do NOT increase the infusion rate.
    *3.* Monitor vital signs every 5 minutes
    *4.* The patient may be placed in Trendelenburg position (if not contraindicated).
    *5.* If blood pressure does not stabilize within 5 – 10 minutes, contact medical control and advise of patient's condition.
    *6.* Institute orders as directed.
*v.* If cardiac dysrhythmias develop refer to appropriate standing medical order for treatment of dysrhythmia.

**GALESBURG COTTAGE EMS SYSTEM**
**PREHOSPITAL CARE MANUAL**

**Critical Care**
Routine Inter-Facility Transfer Care

Inter-Facility Transfer of Patients Receiving IV **Dobutamine**

EMT-P, ECRN

1. Routine inter-facility transfer care.
2. Continue infusion at rate prescribed by referring physician.
   An infusion pump will be utilized to control the rate.
3. If hypotension develops:
   A. Increase the infusion rate by 2 – 5 mcg / kg / minute every 3 – 5 minutes for a total of three (3) times.
   B. Monitor vital signs every 5 minutes when titrating Dobutamine rate.
   C. If hypotension persists after 3 increases in dosage, establish contact with medical control and advise patient's condition.
   D. Institute orders as directed.
4. If hypertension (increase in systolic BP > 50 mm Hg) or tachycardia (increase in heart rate > 30 beats / minute) develop:
   A. Decrease the infusion rate by 2 – 5 mcg /kg / minute every 3 – 5 minutes for total of three (3) times.
   B. Monitor vital signs every 5 minutes when titrating Dobutamine rate.
   C. If hypertension and / or tachycardia persist after 3 decreases in dosage, establish contact with medical control and advise patient's condition.
   D. Institute orders as directed.

5. If cardiac dysrhythmias develop, refer to appropriate standing medical order for treatment of dysrhythmia.

**GALESBURG COTTAGE EMS SYSTEM**
**PREHOSPITAL CARE MANUAL**

**Critical Care**
Routine Inter-Facility Transfer Care

Inter-Facility Transfer of Patients Receiving IV **Heparin**

EMT-P, ECRN

1. Routine inter-facility transfer care.
2. Continue infusion at rate prescribed by referring physician.
3. An infusion pump will be utilized to control the rate.
4. Monitor patient for signs and symptoms of excessive bleeding / hemorrhage.
5. If bleeding develops:
    A. Apply direct pressure, if appropriate.
    B. Discontinue infusion
    C. Establish contact with medical control and advise patient's condition and institute orders as directed.

**GALESBURG COTTAGE EMS SYSTEM**
**PREHOSPITAL CARE MANUAL**

**Critical Care**
Routine Inter-Facility Transfer Care

Inter-Facility Transfer of Patients Receiving **Aggrastat**

EMT-P, PHRN:

**1.** Routine inter-facility transfer care.
**2**. Continue infusi8on at rate prescribed by referring physician. An infusion pump will be used to regulate the flow rate.
**3.** Monitor patient for signs and symptoms of excessive bleeding / hemorrhage.
**4**. If bleeding develops:
A. Apply direct pressure, if appropriate.
B. Discontinue infusion.
C. Establish contact with medical control, advise patient's condition.
D. Institute orders as directed.

**Critical Care**
Routine Inter-Facility Transfer Care

Inter-Facility Transfer of Patients Receiving **Blood Products**
EMT-P, PHRN:

**1**. Routine inter-facility transfer care.
**2**. Continue infusion at rate prescribed by referring physician. An infusion pump will be used to regulate the flow rate unless the patients clinical condition requires that the blood be pressure-infused.
**3**. The blood product will be infused using "Y" blood infusion tubing. Normal saline will be infused prior to and following the transfusion. No medications or other IV infusions may be administered through the blood or blood product. All medications and other IV fluids must be administered though a separate IV site.
**4**. All patients receiving blood or blood products will have an assessment and vital signs monitored every 15 minutes.
**5**. On a transfusion in progress:

The EMT-P/PHRN will continue the transfusion at the rate ordered by the transferring physician.

Once the transfusion is complete, the tubing will be flushed via the "Y" setup with the normal saline.

The patient's vital signs, including temperature, and the time the unit finished infusing will be documented on the Prehospital report and on the blood requisition form.

**6**. When additional unit(s) of blood / blood product are sent with the patient to be administered during the transfer:

Two additional units of blood/blood products may be sent with the patient for transfusion while en route to the receiving facility. The blood will be dispensed by the lab in a small ice chest similar to the one used during Trauma Alerts.

The unit(s) of blood / blood products will be double – checked with a nursing staff member prior to placing the patient in the ambulance. The nurse and the EMT-P / PHRN will document this verification on the blood requisition.

The EMT-P, PHRN will obtain the patient's vital signs, including temperature, prior to the initiation of the transfusion. The information will be documented on the Prehospital record and the blood transfusion form. The time the transfusion is initiated will also be recorded. **CONTINUED ON NEXT PAGE**

Patients Receiving Blood Products, Cont'd

The EMT-P, PHRN will recheck the unit of blood against the blood requisition prior to infusing the unit.

The new unit of blood / blood products may not be infused until after the tubing is cleared of the previous unit with normal saline.

Once the tubing is cleared, the additional unit may be hung and set infusing at the rate ordered by the transferring physician.

The unit of blood / blood products must start to infuse within 25 minutes of its removal from the laboratory of the transferring facility. If the 25 minutes has passed, the unit may not be returned to the laboratory.

The unit must be infused within four (4) hours of its removal from the laboratory of the transferring facility.

**7.** Monitor the patient closely for signs and symptoms of a transfusion reaction.
**8.** In the event that the patient experiences a transfusion reaction, the EMT-P, PHRN will:

Immediately discontinue the transfusion and flush the "Y" tubing with normal saline.

Support the patient's ABCs as required by the patient's clinical condition.

Immediately contact medical control. Advise patient's condition.

The patient may need to be treated for Anaphylaxis.

**9.** The transfusion will be documented on the pre-hospital report and on the blood requisition form. Documentation will include the type of blood product, rate of infusion, the presence / absence of any observed transfusion reactions, and any treatment rendered.
**10.** Upon arrival at the destination, the receiving facility staff will be informed of the blood infusion.
**11.** The original empty blood bag(s) of blood shall be placed in a biohazard bag and returned to the transferring facility along with the blood bank forms and the cooler.
**12.** If the additional unit(s) of blood / blood product are not administered to the patient during the transfer, the blood may be left with the receiving hospital, providing they will accept it. If the receiving hospital lab will not accept the blood, the blood will be transported back to the transferring facility's laboratory.

**GALESBURG COTTAGE EMS SYSTEM**
**PREHOSPITAL CARE MANUAL**

**Critical Care**
Routine Inter-Facility Transfer Care

Inter-Facility Transfer of Patients Receiving IV **Cardiazem**

EMT-P, PHRN:

**1**. Routine inter-facility transfer care.
**2**. The medication will be obtained from the transferring hospital
**3**. If receiving continuous infusion: Continue infusion at rate prescribed by the referring physician. An infusion pump will be used to regulate the flow rate.
**4**. If receiving intermittent IV bolus: Administer the medication according to the transferring physician's orders.
**5**. The patient's vital signs, including heart rate and blood pressure will be monitored and documented every 15 minutes during transport.
**6**. The EMT-P, PHRN will monitor the patient for the development of cardiac dysrhythmias and / or heart block.

E. In the event of AV block, contact medical control for orders.
F. If unable to contact medical control, discontinue the infusion and continue for closely monitor the patients vital signs and cardiac rhythm.
G. If dysrhythmias persist, refer to SMO for cardiac patients.
H. Further attempts to contact medical control will resume after stabilization of the patient.

7.The medication(s) will be documented on the pre-hospital report.
**8**.Upon arrival at the destination, the receiving nurse/MD will be informed of the medication administration.

**Critical Care**
Routine Inter-Facility Transfer Care

Inter-Facility Transfer of Patients Receiving IV **Insulin Infusion**

EMT-P, PHRN:

1. Routine inter-facility transfer care.
2. The medication will be obtained from the transferring hospital.
3. Continue infusion at rate prescribed by referring physician. An infusion pump will be sued to regulate the flow rate.
4. The patient's blood glucose will be measured by AccuChek (or similar device) every 30 minutes throughout the transfer, and documented on the pre-hospital report.
5. The EMT-P / PHRN will be alert for signs / symptoms of hypoglycemia. The blood glucose will be measured immediately if such signs or symptoms develop.
    a. If the blood glucose level < 80 mg%, medical control will be contacted for orders.
    b. If unable to contact medical control, the insulin infusion will be discontinued and 25 Gm of 50% Dextrose will be administered.
    c. Further attempts to contact medical control will resume after stabilization of the patient.
    d. A repeat AccuChek (or similar device) reading will be measured within 5 – 10 minutes following administration of the 50% Dextrose.
6. The medication will be documented on the pre-hospital report.
7. Upon arrival at the destination, the receiving facility staff will be informed of the medication administration.

**Critical Care**
Routine Inter-Facility Transfer Care

Inter-Facility Transfer of Patients Receiving **Total Parenteral Nutrition (TPN)**

EMT-P, PHRN:

1. Routine inter-facility transfer care.
2. The medication will be obtained from the transferring hospital.
3. Continue infusion at rate prescribed by referring physician. Rate changes during transport will occur only with direct physician order. An infusion pump will be used to regulate the flow rate.
4. No medications or IV infusions may be administered through the TPN. All medications and blood products must be administered through a separate IV site.
5. In the event that the infusion pump malfunctions, the EMT-P / PHRN will:
    a. Discontinue the TPN infusion.
    b. Infuse D5W at the rate the TPN was infusing when the pump malfunctioned.
    c. Monitor the patient closely for signs / symptoms of hypoglycemia.
    d. Notify medical control.
6. The patient's vital signs, including heart rate and blood pressure will be monitored and documented every 30 minutes during transport.
7. In the event the patient experiences hypoglycemia, the SMO for Altered Level of Consciousness / Diabetes will be used.
8. The medication shall be documented on the pre-hospital report.
9. Upon arrival at the destination, the receiving facility staff will be informed of the medication administration.

**Critical Care**
Routine Inter-Facility Transfer Care

Inter-Facility Transfer of Patients Receiving IV **Propofol**

EMT-P, ECRN

1. Routine inter-facility transfer care.
2. The medication will be obtained from the transferring hospital.
3. Continue infusion at rate prescribed by referring physician. Rate changes during transport will occur only with direct physician order. An infusion pump will be used to regulate the flow rate.
4. Monitor vital signs every 5-10 minutes.
5. Discontinue and notify appropriate medical direction facility if patient develops severe hypotension, bradycardia or if hypersensitivity occurs.

Contra-indications: Hypersensitivity

Adverse Effects: Bradycardia, hypotension, decreased cardiac output.