Brookland Fire Department First Responder Medical Protocols

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Section 1: General

GENERAL RULES FOR FOLLOWING PROTOCOL

1.1

- These protocols are designed to outline minimal patient treatment procedures. They have been developed to provide guidelines for initiating emergency patient care.
- Fire Department Personnel are members of the Brookland Fire Department who hold current First Responder certification or higher and meet current certification requirements.
- These protocols provide Brookland Fire Department standing orders for Fire Department Personnel. Personnel shall act only within their current certification, training, scope of practice, and Brookland Fire Department policy. When a patient's needs exceed that scope, care shall be transferred to EMS Personnel.

Protocol Deviation

1.2

- If Fire Department Personnel deviate from a protocol or cannot perform the care described, the circumstances shall be documented in the patient report.
  - The documentation should include:
    - Description of the deviation.
    - Reason for the deviation and/or inability to perform the care.
    - Outcome and effect on the patient

Errors

- If an error in patient care occurs, Fire Department Personnel shall immediately document and report it through the Brookland Fire Department chain of command.
  - The documentation shall include:
    - Incident Number (If available)
    - Patient's Name
    - Personnel Involved
    - Description of the error
    - Reason for the error
    - The outcome and effects on the patient
  - The documentation shall be handled through the Brookland Fire Department chain of command.

Consent for Treatment

1.3

Informed, legal consent to treatment and/or transportation must be obtained by Fire Department Personnel.

- For the purpose of this protocol consent, an adult patient is defined as any patient at least 18 years of age.
- All adult patients who are in possession of their mental faculties (conscious, alert and oriented to person, place and date) must give Fire Department Personnel permission for treatment and transportation (verbal consent is sufficient).
- Adult patients who are unconscious may be treated under implied consent.
- Minor patients are unable to give consent except as outlined in Section 6, below. Every effort should be made to obtain legal consent for the treatment of minors from their parent or legal guardian.
    - Minor patients may be treated under implied consent in circumstances which present serious medical conditions, life threats, or have the potential for permanent disability.
    - In situations which involve minors not having a life threatening injury, every reasonable effort to contact the minor's parent or legal guardian should be made to receive consent to treat.
- If a parent cannot be contacted within a reasonable amount of time, the following individuals may give consent, in this order:
    - An adult temporary guardian who is present with the child (i.e. babysitter)
    - A grandparent.
    - An adult brother or sister.
    - An adult aunt or uncle.
- The parent or guardian may leave written authorization for consent to treatment with an educational institution or day care center in which the minor is enrolled. The parent or guardian may also leave written authorization for consent to treatment with an individual.
    - In accordance with 2012 Arkansas Code Title 17, Subtitle 3, Chapter 95, Sub-chapter 1, § 17-95-101 “Good Samaritan”, Fire Department

Personnel may provide medical treatment under the following circumstances:

- Any health care professional under the laws of the State of Arkansas who in good faith lends emergency care or assistance without compensation at the place of an emergency or accident shall not be liable for any civil damages for acts or omissions performed in good faith so long as any act or omission resulting from the rendering of emergency assistance or services was not grossly negligent or willful misconduct.
- Any person who is not a health care professional who is present at an emergency or accident scene and who:
    - Believes that the life, health, and safety of an injured person or a person who is under imminent threat of danger could be aided by reasonable and accessible emergency procedures under the circumstances existing at the scene thereof; and
    - Proceeds to lend emergency assistance or service in a manner calculated in good faith to lessen or remove the immediate threat to the life, health, or safety of such a person, shall not be held liable in civil damages in any action in this state for any act or omission resulting from the rendering of emergency assistance or services unless the act or omission was not in good faith and was the result of gross negligence or willful misconduct.

- No health care professional who in good faith and without compensation renders voluntary emergency assistance to a participant in a school athletic event or contest at the site thereof or during transportation to a health care facility for an injury suffered in the course of the event or contest shall be liable for any civil damages as a result of any acts or omissions by that health care professional in rendering the emergency care. The immunity granted by this subsection shall not apply in the event of an act or omission constituting gross negligence.
- Fire Department Personnel shall follow current Arkansas law and Brookland Fire Department policy when providing emergency assistance.

Hazardous Materials (HAZMAT) Scene Management

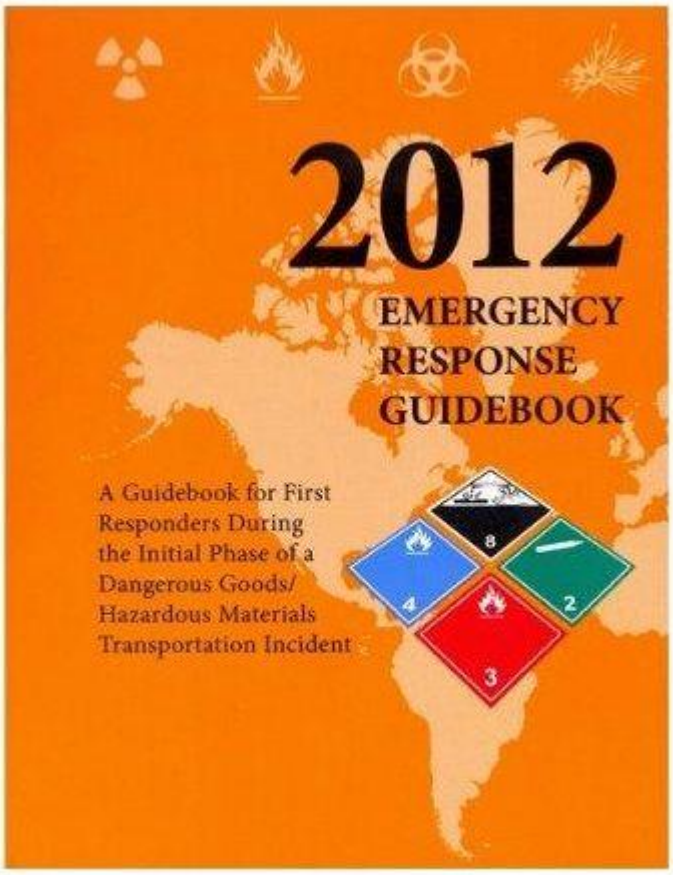
1.4

Assessment & Treatment

When approaching the scene of any accident potentially involving HAZMAT or any cargo:

- Slow Down, assess scene as you approach
- Size up the situation from a safe distance
    - Request additional Brookland Fire Department resources and EMS Personnel as needed.
    - Use ERG Guide to determine material and isolation distances
- Position vehicle **uphill and upwind**
- Isolate the area:
    - Keep people out
    - Do not enter unless fully protected with proper equipment, protective clothing, and Self-Contained Breathing Apparatus (SCBA).
- Assess immediate danger to responder and public
- Do not walk into or touch spilled materials
- Do not walk into confined spaces without SCBA
- Do not walk into, touch or breathe any smoke, fumes, or vapors
- ***If you have any doubt, stay back, keep people from the site and get additional help***

ERG Guidebook



Patient Refusal

1.5

- Any adult patient who may give consent for treatment under *Protocol 1.3:Consent for Treatment* and who is in possession of his/her mental faculties (conscious, alert and oriented to person, place and date) may refuse treatment and/or transport for him/herself or his/her minor child.

- If a patient refuses treatment or transport against medical advice, Fire Department Personnel shall document the refusal and transfer responsibility for any additional refusal process to EMS Personnel. The Brookland Fire Department patient report shall identify the EMS Personnel accepting care.

- If EMS have not arrived and the patient desires to refuse treatment/transport to local area hospital, the Brookland Fire Department must obtain a written refusal by completing the Brookland Fire Department Refusal Form. Advise the patient in full the document they will be signing and obtain a witness signature if possible. Advise the patient of the risks not being seen by medical professionals up to and including death.

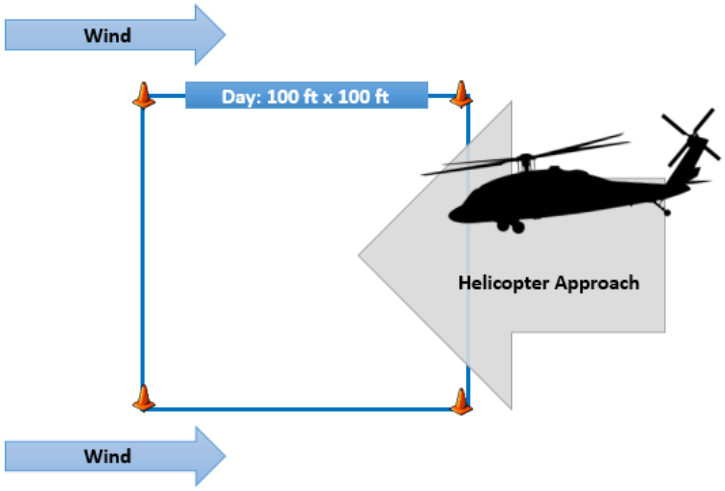
Helicopter Activation

1.6

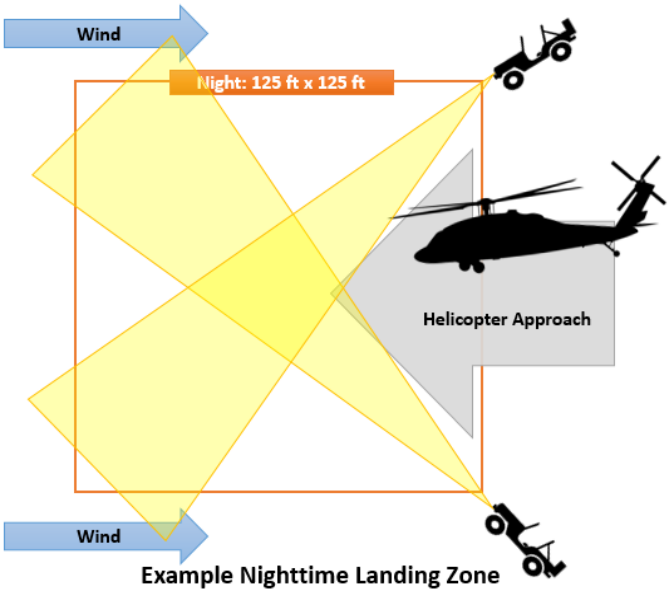
- Fire Department Personnel may consider helicopter activation for patients when the patient is located in an area which is inaccessible by ground ambulance, or when air transport will significantly reduce the time it takes to deliver the patient to appropriate care. A helicopter may be placed on standby by any responding unit prior to arriving on scene, but may only be canceled by someone on scene who holds the highest level of certification that will be responding on the call.
- Helicopter activation should be considered for the following patients when ground transport time is expected to exceed 30 minutes:
    - Any patient located in an area which is not reasonable accessible by ground ambulance
    - Patients with significant injuries with extrication time exceeding 20 minutes
    - GCS <10
    - Blunt force or penetrating trauma to the abdomen, pelvis, chest, neck or head
    - Blunt force abdominal trauma to a pregnant patient presenting with evidence of internal injury
    - Partial or total amputation of an extremity (excluding single digits)
    - Significant crushing injuries
    - Burns which are 2nd or 3rd degree in nature in which:
        - BSA is >9% or to the hands, feet, face, or perineum
        - Significant electrical, inhalation, or chemical burns are present
    - Near drowning patients presenting with pulmonary edema
    - Ejection from a moving vehicle in which the patient presents with significant injuries
    - Extrication time > 20 minutes from a vehicle or machinery
    - Fall from a height of greater than three times the patient's height
    - Any scalping or de-gloving injury
    - Spinal cord/spinal column injury resulting in paralysis

- Any other situation in which the credentialed Fire Department Personnel deems necessary

- Landing Zone Requirements



Example Daytime Landing Zone



Example Nighttime Landing Zone

Scene Safety

1.7

1. This policy provides general information related to scene safety.
2. This policy does not comprehensively cover all possible situations, and Fire Department Personnel judgment should be used when policy does not provide specific direction.

This applies to every Fire response, particularly if dispatch information or initial scene size-up suggests:

1. Violent patient or bystanders
2. Weapons involved
3. Industrial accident of MVA with potentially hazardous materials
4. Patient(s) contaminated with chemicals

Procedure:

1. If violence or weapons are anticipated:
    a. Fire Department Personnel shall remain at a safe location until the scene is confirmed secure before entry.
    b. Avoid entering the scene alone.
2. If violence is encountered or threatened, Fire Department Personnel shall retreat to a safe location and follow Brookland Fire Department scene-safety procedures.

MVAs, Industrial Accidents, Hazardous Materials situations:

1. General Considerations:
    a. Obtain as much information as possible prior to arrival on the scene.
    b. Look for hazardous materials, placards, labels, spills, and/or containers (spilling or leaking)
    c. Consider entering scene from uphill/upwind
    d. Look for downed electrical wires
    e. Call for assistance, if needed.
2. Upon approach of scene, look for a place to park the vehicle:
    a. Upwind and uphill from possible fuel spills and hazardous materials
    b. Park in a manner that allows for rapid departure
    c. Allow for access for fire rescue and other support vehicles

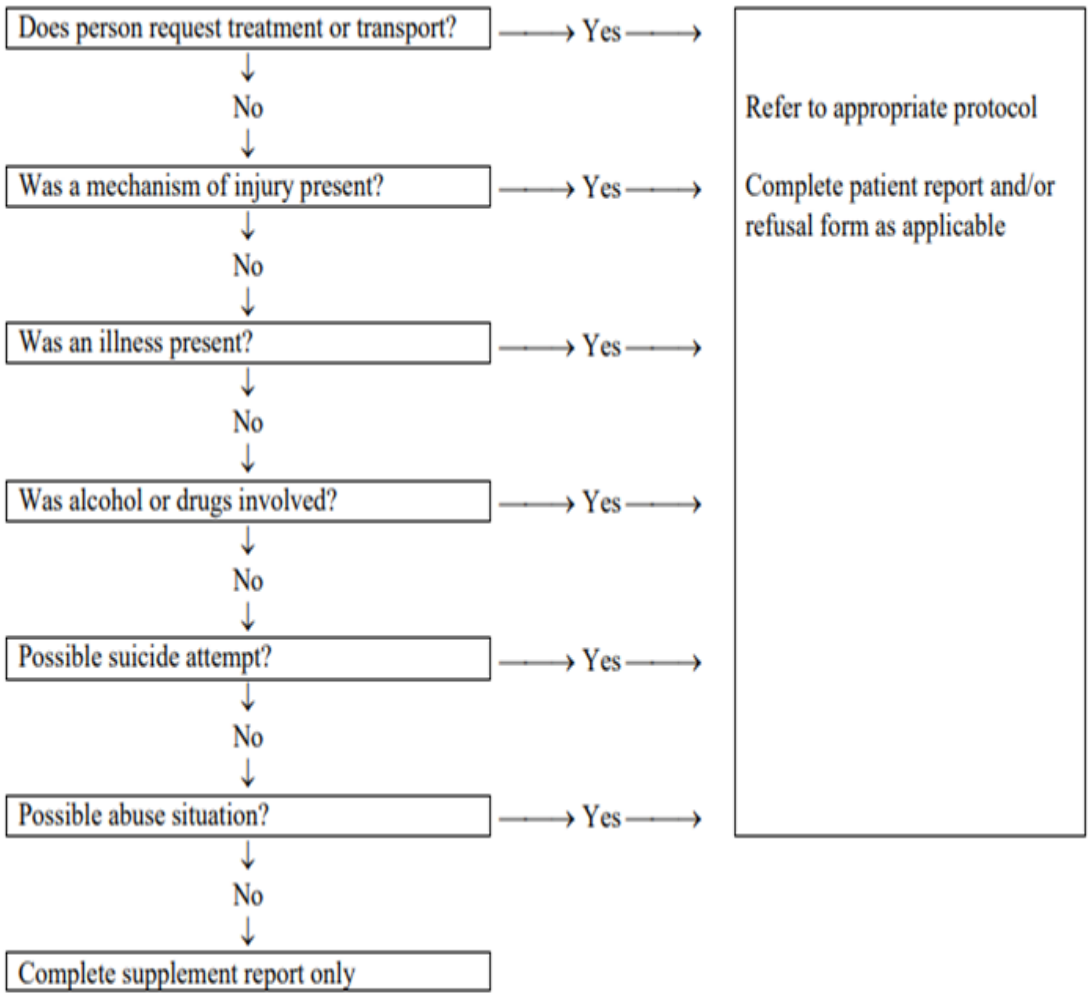
3. Safety:
    a. Consider placement of flares and other warning devices
    b. Avoid entering a damaged or disabled vehicle until it is stabilized
    c. Do not place your vehicle so that its lights blind oncoming traffic
    d. Use all available lights to illuminate the scene on all sides of your vehicle
    e. PPE is suggested for all responders entering vehicle or in area immediately around involved vehicle(s).

Fire Department Personnel shall wear department-approved high-visibility reflective outerwear at roadway scenes when required by applicable regulation and Brookland Fire Department policy.

No Patient Incidents

1.8

- **Purpose**
  - To give Fire Department Personnel the criteria needed to decide if a patient was present and a patient report must be completed.



Examples of No Patient calls (with no person at the scene who meets the above criteria):

1. EMS Standby.
2. Fire Standby.
3. PD Standby.
4. Public assist.
5. Patient Gone on Arrival of EMS.

Do Not Resuscitate (DNR) Orders

1.9

Purpose

Brookland Fire Department will honor a valid Arkansas EMS/DNR order or another medical order that is legally recognized for out-of-hospital cardiac or respiratory arrest and permitted by the Brookland Fire Department EMS/DNR implementation procedure.

A DNR order applies to cardiopulmonary resuscitation during cardiac or respiratory arrest. It does not prohibit assessment, comfort measures, or treatment that is not excluded by the order.

Procedure

1. Assess the patient and determine whether cardiac or respiratory arrest is present.
2. Look for the original or a legible copy of the order, recognized DNR identification, or other documentation permitted by current Arkansas law. Match the patient identity and verify that the document contains the elements required for validity.
3. If the order is valid and applies to the current condition, do not begin—or discontinue—CPR, defibrillation, assisted ventilation, advanced airway procedures, and resuscitation medications as directed by the order. Provide comfort measures within the certification and training of Fire Department Personnel.
4. If the order is missing, appears invalid, has been revoked, does not match the patient, or is disputed, begin or continue resuscitation. Transfer care to EMS Personnel, who shall obtain any required medical direction under applicable EMS protocols.
5. If a patient with decision-making capacity communicates revocation of the order before arrest, treat the order as revoked and document the communication.
6. Keep the order or a copy with the patient when care is transferred to EMS Personnel.

Documentation

• Document the type of order or identification, the patient-identification match, signatures and dates visible on the document, the patient's condition, care provided or withheld, any dispute or revocation, and the name of EMS Personnel accepting care.
• If the validity of an order is uncertain, document why resuscitation was initiated or continued.

Death on Scene (DOS)

1.10

- In the case of a clinically dead patient, it is the responsibility of the on scene personnel to determine whether or not resuscitative efforts should be started. That determination should be based on the extent of the injury and the length of down time.
  - Definition of clinical death (DOS).
    - Visible head or chest trauma clearly incompatible with life.
    - Decapitation.
    - Rigor mortis.
    - Dependent lividity.
    - Decomposition.
    - Absence of breathing and pulse in a mass casualty incident.
  - The body shall not be disturbed or moved except as required for safety or under Brookland Fire Department procedure.
  - Notify the Brookland Fire Department chain of command and follow Brookland Fire Department death-on-scene procedures.
  - Fire Department Personnel are required to document the absence of vital signs and any evidence of death.
  - If possible, document patient history.
  - Limit access to essential Fire Department Personnel and preserve the scene.
  - At least one member of Fire Department Personnel shall remain available to relay pertinent information through the Brookland Fire Department chain of command.

Suspected Abuse

1.11

- When treating any patient suffering from injuries and/or illnesses suspected as abuse, Fire Department Personnel shall:
  - As with all patients, conduct the patient assessment and continue with patient care.
  - Be sure to use extreme tact and professionalism when dealing with this situation. **DO NOT** let your emotions enter the situation when dealing with the relatives or acquaintances of the individual.
  - Follow Brookland Fire Department scene-safety and notification procedures as soon as possible.
  - Be alert to any evidence that might be found. Be cautious and do not destroy any evidence.
  - Upon arrival, inform EMS Personnel of concerns and findings in a confidential setting.
  - At the completion of the call, fully document the incident, including information relayed to EMS Personnel and actions taken under Brookland Fire Department policy.
  - Fire Department Personnel witnessing signs of suspected abuse shall document objective facts and immediately notify the Brookland Fire Department chain of command so mandatory reporting can be completed in accordance with current Arkansas law and Brookland Fire Department policy.

Abandoned Children

1.12

- Under the Arkansas Safe Haven Act, Brookland Fire Department may accept a child who is 30 days old or younger when the child is voluntarily delivered without an expressed intent to return. Fire Department Personnel shall protect the child's health and safety, preserve confidentiality, notify the Brookland Fire Department chain of command, and follow current Arkansas law and Brookland Fire Department policy. (Reference: Ark. Code §§ 9-34-202 and 9-34-203.)
- **Procedure:**
  - Assess and treat the child in accordance with protocols.
  - Notify the Brookland Fire Department chain of command and request EMS Personnel for continued care and transport.

Self-Protection

1.13

- Guidelines for Fire Department Personnel to protect themselves from physical danger by a violent person with or without a weapon:
  - When physical harm is probable, Fire Department Personnel and EMS Personnel shall stage at a safe location and shall not enter until the scene is confirmed secure. The safety of personnel is the primary consideration.
  - If threatened with bodily harm, Fire Department Personnel shall avoid confrontation, leave the area immediately, and follow Brookland Fire Department scene-safety procedures.
  - When personal injury appears imminent, Fire Department Personnel shall withdraw when possible and follow Brookland Fire Department scene-safety procedures.

Concealed Weapons

1.14

Concealed Weapons on Patients

- If a patient is found to be carrying a concealed weapon and the patient is to be transported, the following procedure will be followed:
  - Do not handle a weapon unless required to prevent immediate harm. Maintain scene safety and follow Brookland Fire Department procedures.
  - If a weapon creates an immediate hazard before EMS Personnel assume care, Fire Department Personnel shall:
    - Avoid moving or securing the weapon unless required to prevent immediate harm; follow Brookland Fire Department procedures.
    - Inform EMS Personnel of the hazard during transfer of care.

Non-Credentialed Personnel

1.15

- Personnel who are not credentialed under these protocols may be used for assistance with the following guidelines:
    - Fire Department Personnel who are not medically certified may assist EMS Personnel with CPR, lifting, moving patients, and supplies only within their training and Brookland Fire Department policy. Whenever possible, non-certified personnel shall not be the first to arrive at a medical scene.
    - EMS Personnel may assist with BLS treatment within their certification, training, and applicable EMS protocols while coordinating with Fire Department Personnel.
    - Patient care under this protocol shall be performed only by Fire Department Personnel and EMS Personnel acting within their certification, training, and scope of practice.

Patient Reports

1.16

- **Patient Reports**
  - Fire Department Personnel shall complete a patient report when patient contact begins before EMS Personnel arrive or when a refusal is obtained. If EMS Personnel arrive before or at the same time and assume care for transport, Fire Department Personnel shall complete the reports required by Brookland Fire Department policy.
- **Confidentiality**
  - All patient reports are considered confidential. All information pertaining to the identification of a patient will not be discussed outside of the realm of patient care, QI/QA and billing. Under no circumstance is patient information to be released outside of the circumstances listed above unless the patient (or parent/guardian of a minor) has expressed their desire to release information in writing or upon subpoena.
- **Verbal reports to transporting crew**
  - EMS Personnel shall be notified when a patient is being prepared for transport. The verbal report shall include the illness or injury, vital signs, relevant history, and care rendered.
  - Upon arrival, Fire Department Personnel shall give EMS Personnel a verbal report and transfer care. The report shall include the illness or injury, vital signs, relevant history, and care rendered.
- **Written Reports to transporting crew**
  - The patient data sheet shall be completed as soon as possible after patient contact and provided to EMS Personnel when care is transferred, consistent with Brookland Fire Department policy.

Inventory List

1.17

- The list represents the minimum BLS equipment and supplies to be carried by Fire Department Personnel when responding to medical calls.

Item	Quantity
1" Tape	1
4" Roller bandage	3
4x4's	10
Adaptics	2
Band-aids	5
Bite stick	1
BP Cuff Adult	1
Sterile, Dry, Burn Sheet	1
BVM – Adult/or pocket mask w one-way valve	1
Pocket Mask	1
Antiseptic, Waterless Cleaner	1
EMT Shears	1
Gloves (to fit the first responder)	10 pair
Multi-trauma pad	1
Airway Adjunct: OPA or NPA Set (Size 0 – 6)	1
Oval Eye Pads	3
Pen Light	1
Protective Gowns	1
Protocol Book	1
Rescue/Foil Blankets	1
Small Bio-Hazard trash bags	2
Stethoscopes	1
Surgipads	2
Triangular Bandages	3
Oxygen	1
Pedi non re-breather mask	1
Adult Nasal Cannula	1
Adult Non re-breather Mask	1
Sterile Water	1

Section 2: Procedures

Universal Precautions

2.1

Procedure: All patients

1. Wear gloves on all calls where contact with blood or body fluid (including wound drainage, urine, vomit, feces, diarrhea, saliva, nasal discharge) is anticipated or when handling items or equipment that may be contaminated with blood or other body fluids.
2. Wash your hands often and after every call. Wash hands even after using gloves:

    1.2.a. Use hot water with soap and wash for 15 seconds before rinsing and drying.

    1.2.b. If water is not available, use alcohol or a hand-cleaning germicide.
3. Keep all open cuts and abrasions covered with adhesive bandages that repel liquids (e.g. cover with commercial occlusive dressings or medical gloves)
4. Use eye protection when spraying or splashing of body fluids is possible (for example, spitting or arterial bleeding). As soon as possible, Fire Department Personnel shall wash the face, neck, and any other body surfaces exposed or potentially exposed to body fluids.
5. If Fire Department Personnel are exposed to blood or body fluids, they shall follow Appendix A and immediately notify the Brookland Fire Department infection control officer through the Brookland Fire Department chain of command. Prompt medical evaluation shall be arranged under the Brookland Fire Department exposure-control plan.
6. Preventing exposure to respiratory diseases:

    1.6.a. Respiratory precautions should be used when caring for any patient with a known or suspected infectious disease that is transmitted by respiratory droplets. (E.g. tuberculosis, influenza, or SARS)

    1.6.b. HEPA mask (N-95 or better), gowns, goggles and gloves should be worn during patient contact.

    1.6.c. A mask should be placed upon the patient if his/her respiratory condition permits.

7. Thoroughly clean and disinfect equipment after each use according to the Brookland Fire Department exposure-control plan.
8. Place all disposable equipment and contaminated trash in a clearly marked plastic red biohazard bag and dispose of appropriately. Contaminated clothing should be removed, placed in an appropriately marked red biohazard bag and laundered/decontaminated.

Initial Protocol for ALL Patients

2.2

Scene Size-Up:

A. As you approach the scene assure safety for yourself, your crew, co-responders, the patient and bystanders.
B. Establish and follow Incident Command System when indicated.

BSI (Body Substance Isolation):

A. Prior to patient assessment, employ precautions to prevent contact with potentially infectious body fluids or hazardous materials.
B. Wear appropriate protective gear to protect eyes, mucous membranes and skin.
C. Wear other appropriate specialized protective gear when the potential exists for contact with biological and hazardous materials.

Initial Assessment: Perform initially on every patient to form a general impression of needs and priorities

A. Assess patient's mental status.
    1. Maintain manual spinal immobilization if indicated until a definitive determination is made regarding the indications for spinal restriction.
B. Assess the patient's airway status.
    1. Responsive Patients: Generally assumed to have an open airway. Assess for any unusual strictures that may need to be addressed i.e. foreign object.
    2. Unresponsive patient:
        a. Stabilize/Immobilize the cervical spine and perform the jaw thrust maneuver as indicated in those patients with unknown nature of illness/injury or known/suspected trauma.
        b. Open airway using head tilt/chin lift as necessary for patients with no traumatic involvement.
C. Assess the patient's breathing/ventilation status using the following techniques:
    1. General appearance
    2. Skin color
    3. Depth and rate of respirations
    4. Lung sounds
    5. Retractions, accessory muscle use
    6. Pulse Oximetry as indicated (see *Oxygenation, Ventilation, and Pulse Oximetry Policy)*
D. Oxygenation and Ventilation as indicated (see *Oxygenation, Ventilation, and Pulse Oximetry Policy)*
E. Assess circulation.
    1. Assess for adequate signs of perfusion and begin CPR if indicated
    2. Check for major bleeding and control if found.
    3. Check adequate perfusion by evaluating skin color and temperature.
    4. Capillary refill is more reliable as an indicator of perfusion adequacy in pediatric patients than in the adult population.

AED

2.3

An Automated External Defibrillator (AED) shall be applied as soon as it is available to a patient who is unresponsive, is not breathing normally or is only gasping, and has no definite pulse within 10 seconds. Do not delay AED use to complete a predetermined period of CPR.

Procedure

1. Begin high-quality CPR immediately. Continue compressions while another member prepares the AED and exposes the chest.
2. Turn on the AED and follow its prompts. Attach pads in the position shown on the pads or package. Do not pause compressions longer than necessary to attach pads.
3. When the AED analyzes, clearly announce 'Clear' and verify that no one is touching the patient.
4. If a shock is advised, verify that everyone is clear, deliver one shock, and immediately resume CPR for approximately 2 minutes or until the AED prompts another analysis.
5. If no shock is advised, immediately resume CPR for approximately 2 minutes or until the AED prompts another analysis.
6. Continue CPR and AED use until EMS Personnel assume care, the patient shows signs of life, or Fire Department Personnel cannot continue safely.

Pediatric Use

• For infants and children, use pediatric pads and a pediatric attenuator when available. If pediatric equipment is unavailable, use adult pads and ensure that the pads do not touch each other. Do not withhold AED use solely because pediatric pads are unavailable.
• For a small chest, use anterior-posterior pad placement when needed to prevent pad contact. Follow the AED manufacturer's instructions.

Safety

• Dry a wet chest, remove medication patches from the pad location while wearing gloves, avoid placing pads directly over an implanted device, and keep oxygen sources away from the patient's chest during shock delivery.

Cardiopulmonary Resuscitation (CPR)

2.4

High-quality CPR requires an appropriate compression rate and depth, complete chest recoil, minimal interruptions, and ventilation that produces visible chest rise without hyperventilation. Use the AED as soon as it is available.

General Requirements

• Place the patient supine on a firm surface when practical. Do not delay compressions to move the patient unless the current location prevents effective CPR or is unsafe.
• Compress at 100 to 120 compressions per minute. Allow complete recoil and limit interruptions to less than 10 seconds.
• Switch compressors approximately every 2 minutes, or sooner if the compressor becomes fatigued, while minimizing the pause.
• Deliver each ventilation over approximately 1 second and only until visible chest rise occurs.

Adult CPR

• Compression depth: at least 2 inches (5 cm), while avoiding excessive depth greater than 2.4 inches (6 cm).
• Without an advanced airway: 30 compressions to 2 ventilations.
• With an advanced airway placed by EMS Personnel: continuous compressions with 1 ventilation every 6 seconds (10 per minute).

Child and Infant CPR

• Compression depth: at least one-third the front-to-back depth of the chest—approximately 2 inches (5 cm) for a child and 1.5 inches (4 cm) for an infant.
• One rescuer: 30 compressions to 2 ventilations. Two or more rescuers: 15 compressions to 2 ventilations.
• With an advanced airway placed by EMS Personnel: continuous compressions with 20 to 30 ventilations per minute.

If the patient has a pulse but is not breathing normally, provide ventilations at the age-appropriate rate and reassess the pulse at least every 2 minutes.

Patient Restraint

2.5

- **Indications:**
  1. A patient who presents an immediate danger may be restrained by EMS Personnel only as reasonably necessary to prevent injury. Physical restraint is a last resort after less restrictive measures have failed. Fire Department Personnel may assist only within their training and Brookland Fire Department policy.
  2. Any physical restraint that is performed by EMS Personnel must be in a humane manner and used only as a last resort. Other means to prevent injury to the patient or crew must be attempted first including reality orientation, distraction techniques, or other less restrictive therapeutic means.
  3. For the purposes of this protocol, any patient who presents a significant danger to him/herself or others on scene may be physically restrained by EMS Personnel as necessary.

- **When patient restraint becomes necessary, the following procedures shall be used:**
  1. When at all possible, use techniques which will not cause injury to the patient.
  2. Use the minimum amount of force necessary to secure restraints.
  3. Request additional Brookland Fire Department resources as needed and maintain a safe scene.
  4. Fire Department Personnel shall not remove restraint devices they are not trained or authorized to remove. Transfer care and provide a complete report to EMS Personnel.
  5. Ensure that there are sufficient personnel available to physically restrain the patient safely
  6. Caution should be used to not restrict the respiratory efforts of the patient.
  7. Restrain the patient in a lateral or supine position. Avoid restraining the patient in the prone position.
  8. Pulse and other measures to assure distal circulation will be checked frequently following the application of restraints.
  9. At the termination of the call, fully document all pertinent details including signatures of witnesses if possible. Documentation should include the reason for the use of restraints, the type of restraints used, and the time restraints were placed. Remember, a restrained patient is totally dependent on the Fire Department Personnel for their safety. The patient must always be under constant observation by the Fire Department Personnel.

Hemostatic Agent

2.6

Hemostatic Agents (Quik-Clot®, HemCon®) may be used by the Fire Department Personnel to control bleeding which is not controllable through first-line methods of hemorrhage control (direct pressure, limb elevation, tourniquet application). If the Fire Department Personnel deems it necessary to utilize such an agent, is it NOT necessary to utilize first-line methods to attempt to control hemorrhaging before utilizing a hemostatic agent.

Guidelines:

- The Fire Department Personnel should be able to quickly determine if hemorrhaging is likely to be controllable by a hemostatic agent. If hemorrhaging is deemed to be controllable by hemostatic agent, apply hemostatic agent per manufacturer's recommendations. If hemorrhaging is deemed too severe to be controlled by a hemostatic agent, refer to Tourniquet Application protocol.

Tourniquet Application

2.7

A tourniquet is indicated for life-threatening extremity bleeding that is not controlled by direct pressure, when direct pressure cannot be maintained, or when the injury requires immediate tourniquet placement. A commercially manufactured windlass tourniquet is preferred.

Application

1. Expose the injury when practical. Place the tourniquet 2 to 3 inches above the bleeding site, not over a joint. If the wound cannot be quickly located, place the tourniquet high on the injured limb.
2. Tighten the tourniquet until bleeding stops. Secure the windlass and strap according to the manufacturer's instructions.
3. If bleeding continues, apply a second commercial tourniquet immediately above and next to the first.
4. Record the application time, leave the tourniquet visible, and document the location and response.
5. Do not loosen or remove a tourniquet after application. Transfer responsibility for reassessment and removal to EMS Personnel under applicable EMS protocols.

• An improvised tourniquet may be used only when a commercial device is unavailable and Fire Department Personnel have been trained in its construction and use. Use a wide band and a rigid windlass; narrow cords or wire shall not be used.

• The same bleeding-control principles apply to children. Use an approved commercial device that fits the limb; do not use a fixed weight cutoff as the sole reason to withhold a tourniquet.

Oxygen Administration

2.8

Oxygen is a medical intervention. Fire Department Personnel may administer oxygen only within their current certification, training, equipment authorization, and Brookland Fire Department protocols.

Indications

• Administer oxygen when the patient has hypoxemia, inadequate breathing, significant respiratory distress, shock, carbon-monoxide or smoke exposure, or another condition for which oxygen is indicated by these protocols.

• Do not administer routine high-flow oxygen solely because a patient has chest pain or a suspected stroke when breathing and oxygenation are adequate.

Procedure

1. Assess airway, breathing, mental status, skin signs, and circulation. Use pulse oximetry as one part of the assessment when a reliable signal is available.
2. Choose the least invasive device that provides adequate oxygenation and ventilation. Titrate oxygen to clinical response and applicable EMS targets rather than automatically using the maximum flow.
3. For a patient with known or suspected chronic obstructive pulmonary disease, avoid increasing oxygen saturation above 92 percent unless the patient has a life-threatening condition or EMS Personnel direct otherwise.
4. Use high-concentration oxygen with a bag-mask device during cardiac arrest, severe respiratory failure, or other critical hypoxemia when indicated.
5. Continuously reassess the patient and document the device, flow rate, oxygen saturation, and response.

Oxygenation, Ventilation, and Pulse Oximetry

2.9

Ventilation

• Adult with a pulse and inadequate breathing: 1 ventilation every 6 seconds (10 per minute).
• Infant or child with a pulse and inadequate breathing: 1 ventilation every 2 to 3 seconds (20 to 30 per minute).
• Cardiac arrest without an advanced airway: use the compression-to-ventilation ratios in Protocol 2.4.
• Cardiac arrest with an advanced airway placed by EMS Personnel: adult—10 ventilations per minute; infant or child—20 to 30 ventilations per minute, with continuous compressions.
• Deliver each ventilation over approximately 1 second and only until visible chest rise occurs. Avoid excessive rate or volume.

Pulse Oximetry

• Use pulse oximetry only with a complete clinical assessment. Confirm that the displayed pulse matches the patient's pulse and trend readings rather than relying on a single value.
• Motion, poor perfusion, hypothermia, nail products, carbon monoxide exposure, smoke inhalation, methemoglobinemia, and skin pigmentation may affect accuracy.
• Pulse oximetry is not a reliable measure of CPR effectiveness in a pulseless patient.

Spinal Motion Restriction

2.10

Spinal motion restriction may be performed at the Fire Department Personnel's discretion on any patient with a mechanism of injury which suggests a possible spinal injury. Patients with a significant mechanism of injury and a complaint that includes neck pain, back pain, numbness, tingling, or other neurological symptom should have spinal motion restriction performed, unless the Fire Department Personnel deems that doing so would hinder the ability to administer care or further harm the patient. A "significant mechanism of injury" includes, but is not limited to:

- Falls of greater than 3 times the patient's height
- High-speed motor vehicle collisions
- Rollover accidents
- Auto-versus-pedestrian/motorcycle/bicycle accidents

When performing spinal motion restriction, the following guidelines should be followed:

- Initiate manual spinal stabilization by holding the patient's head and instructing the patient not to move his/her head
- Place an appropriately-sized cervical collar on the patient
- When placing the patient on a backboard, roll the patient as a unit, with the Fire Department Personnel at the patient's head directing the effort

Section 3: Assessment Tools

Diagnostic Tests

3.1

All diagnostic tests listed below are assessment tools which may be used at the discretion of any Fire Department Personnel when the equipment is available.

Blood pressure determination
Blood pressure determination should be the primary method of determining perfusion status for most patients. Patients on whom blood pressure is obtained should have at least one set of vital signs including the blood pressure documented during patient contact. Blood pressure should be checked following the administration of all medications. While blood pressure is an excellent tool to evaluate an adult patient's perfusion status, it is less useful in pediatric patients.

Pulse oximetry
Pulse oximetry is an assessment tool to assess the patient's oxygenation before and after oxygen administration. It should not be used to replace good judgment or determine whether or not the patient requires oxygen. Regardless of the pulse oximetry reading obtained, oxygen should not be withheld from any patient presenting with signs or symptoms which indicate the need for oxygen, especially patients exhibiting cardiac or respiratory complications or altered mental status. Pulse oximetry readings can be altered by carbon monoxide poisoning, decreased blood pressure, cold extremities, and the inability of the sensor to take an accurate measurement such as when the patient is wearing fingernail polish.

Temperature determination
Temperature may be obtained on any patient deemed necessary by the Fire Department Personnel, with primary emphasis on patients suffering from environmental emergencies, elderly patients with altered mental status, and pediatric seizures. It is preferable to obtain an oral temperature by placing the tip of the thermometer under the patient's tongue, although an axillary temperature may be obtained by placing the tip of the thermometer in the patient's armpit with the patient's arms to his/her side. The method used to obtain the temperature should be documented regardless of which one is used.

General Patient Assessment

3.2

General guidelines for the assessment of all patients

Scene size-up/assessment

- Body substance isolation (BSI)
- Scene safety
- Mechanism of injury/Nature of illness
- Number of Patients (call for help as needed)
- Personnel safety

Initial Patient Assessment

- Rapid initial assessment to identify life threatening medical or traumatic emergencies
- Evaluate the patient's chief complaint and general impression to determine the presence of any life-threatening injuries
- Central nervous system evaluation to include:
    - Level of consciousness and mental status
    - Sensory response
    - Motor response
- Airway / breathing evaluation to include:
    - Presence or absence of breathing efforts
    - Rate of respirations
    - Depth of respirations
    - Regularity of respirations
    - Auscultation of breath sounds
- Circulatory evaluation to include:
    - Presence or absence of pulse
    - Rate of pulse
    - Strength of pulse
    - Regularity of pulse

Patient Assessment

- Reassess the chief complaint
- Perform a detailed physical exam or a focused physical exam as indicated by the patient's condition. A detailed physical exam should include a complete head to toe survey with emphasis on the body system affected by the chief complaint.
- Assess vital signs.
    - Respirations (rate, quality, rhythm)
    - Pulse (rate, quality, rhythm)
    - Blood pressure and/or capillary refill
    - All patients evaluated by Fire Department Personnel shall have a minimum of one set of vital signs recorded as time and patient condition allows (it is the intent of this protocol that a set of vital signs be obtained on all patients). Any seriously injured or ill patient

shall have vital signs recorded at 5-10 minute intervals.
- Assess SAMPLE History.

Additional Assessment

- Additional assessments which may be indicated by the patient's condition when equipment is available.
  - Pulse oximetry
  - Temperature determination

Results of all assessments shall be documented in the patient report

Glasgow Coma Scale: Adult

3.3

Condition	*Variable*	*Score*
Eye Opening	Spontaneous	4
	To Voice	3
	To Pain	2
	No Response	1
Best Verbal Response	Oriented	5
	Confused	4
	Inappropriate Words	3
	Incomprehensible Words	2
	No Response	1
Best Motor Response	Obeys Commands	6
	Localizes Pain	5
	Withdrawal	4
	Flexion (Decorticate Rigidity)	3
	Extension (Decerebrate Rigidity)	2
	No Response	1

Revised Trauma Score: Adult

3.4

Revised Trauma Score: Adult		
Condition	***Variable***	***Score***
Respiratory Rate (Breaths/min)	10 - 24	4
	23 - 35	3
	=> 36	2
	1-9	1
	0	0
Systolic BP	> 89	4
	70 - 89	3
	50 - 69	2
	1 - 49	1
	0	0
Glasgow Coma Scale Score Conversion	13 - 15	4
	9 - 12	3
	6 - 8	2
	4 - 5	1
	< 4	0

Glasgow Coma Scale: Pediatrics

3.5

Glasgow Coma Score: Pediatric				
Condition	***Variable Age >1***		***Variable Age <1***	***Score***
Eye Opening	Spontaneous		Spontaneous	4
	To Voice		To Voice	3
	To Pain		To Pain	2
	No Response		No Response	1
Motor Response	Obeys Commands		Obeys Commands	6
	Localizes Pain		Localizes Pain	5
	Withdrawal		Withdrawal	4
	Flexion (Decorticate Rigidity)		Flexion (Decorticate Rigidity)	3
	Extension (Decerebrate Rigidity)		Extension (Decerebrate Rigidity)	2
	No Response		No Response	1
Condition	***Age >5 years***	***Age 2 - 5 years***	***Age 0 - 23 months***	***Score***
Verbal Response	Oriented	Appropriate Words and Phrases	Smiles, Coos, Cries Appropriately	5
	Confused	Inappropriate Words	Cries	4
	Inappropriate Words	Cries and/or Screams	Inappropriate Crying and/or Screaming	3
	Incomprehensible Words	Grunts	Grunts	2
	No Response	No Response	No Response	1

Trauma Score: Pediatric & APGAR Score

3.6

Pediatric Trauma Score			
	Score		
Assessment	**+ 2**	**+ 1**	**- 1**
Weight	> 44 lb (> 20 kg)	22 - 44 lb (10-20 kg)	< 22 lb (< 10 kg)
Airway	Normal	Oral Airway Nasal Airway	Intubated Tracheostomy Invasive
Blood Pressure	Pulse at Wrist > 90 mmHg	Carotid or Femoral Pulse 50 - 90 mmHg	No Palpable Pulse < 50 mmHg
Level of Consciousness	Completely Awake	Obtunded or any Decreased level of consciousness	Comatose
Open Wound	None	Minor	Major or Penetrating
Fractures	None	Closed Fracture	Open or Multiple Fractures

APGAR Score			
Sign	**0**	**1**	**2**
Appearance	Blue, Pale	Body Pink, Extremities Blue	Completely Pink
Pulse Rate	Absent	Below 100	Above 100
Grimace	No Response	Grimaces	Cries
Activity	Limp	Some Flexion	Active Motion
Respiratory	Absent	Slow and Irregular	Strong Cry

Section 4: Treatments

Abdominal Pain

4.1

1. Administer oxygen, if appropriate
2. If traumatic cause is suspected, **see Abdominal Injuries (4.2)**
3. Do **not** allow the patient to eat or drink
4. Assess for shock and treat, if appropriate, **see Shock**
5. Place patient in a position of comfort

Abdominal Injuries

4.2

1. Monitor the airway
2. Administer oxygen
3. Monitor breathing for adequacy
4. Control external bleeding
5. Assess for shock and treat, if appropriate **see Shock**

Altered Mental Status

4.3

When possible, the Fire Department Personnel should attempt to determine the reason for altered mental status. If a reason for the altered mental status can be identified which is covered by another protocol, refer to that protocol for more specific treatments.

Consider spinal immobilization

- Administer oxygen, if indicated
- Assess vital signs
- If breathing is inadequate, provide bag-mask ventilation with an appropriate basic airway adjunct: adults at 10 ventilations per minute; infants and children at 20 to 30 ventilations per minute. Deliver only enough volume to produce visible chest rise.
- If the gag reflex is absent, consider an appropriately sized oropharyngeal airway. Use a nasopharyngeal airway when otherwise indicated and not contraindicated.

Allergic Reaction

4.4

The Fire Department Personnel should attempt to determine the cause of the allergic reaction, if possible. If it is possible to remove the patient from the cause of the allergic reaction, the Fire Department Personnel should attempt to do so. Common causes of allergic reactions include latex, peanuts, shellfish, and insect bites/stings.

General Care:

- Assess responsiveness, including ABC's
- Administer oxygen only when indicated under the Oxygen Administration protocol.
- If breathing is inadequate, provide bag-mask ventilation: adults at 10 ventilations per minute; infants and children at 20 to 30 ventilations per minute. Deliver only enough volume to produce visible chest rise.
- If no gag reflex is present, insert airway adjunct
    - Use an appropriately sized oropharyngeal or nasopharyngeal airway when indicated and not contraindicated.
- Assess vital signs
- Place patient in position of comfort
- Pulse oximetry, if available

Animal Bite/Sting

4.5

General Care:

- Assess responsiveness, including ABC's
- Administer oxygen, if indicated
- Place patient in position of comfort
- If signs of allergic reaction are present, refer to Allergic Reaction protocol
- Pulse oximetry, if available
- Control bleeding and dress wounds as necessary

If venomous animal bite/sting:

- Attempt to identify the animal which bit/stung the patient
- Remove tight clothing and jewelry
- Splint limb and place in a dependent position below the level of the heart.
- Assess distal pulse, motor, and sensory functions before and after splinting

Cardiac Arrest

4.6

Cardiac arrest is present when a patient is unresponsive, is not breathing normally or is only gasping, and has no definite pulse within 10 seconds. Agonal gasps are not normal breathing.

Cardiac Arrest vs. Chest Pain

A patient with chest pain is usually responsive, breathing, and has signs of circulation. A patient in cardiac arrest is unresponsive, has absent or abnormal breathing, and has no definite pulse. A patient with chest pain may deteriorate into cardiac arrest at any time.

Procedure

1. Confirm scene safety, check responsiveness, and assess breathing and pulse simultaneously for no more than 10 seconds.
2. If no definite pulse is felt, begin high-quality CPR immediately and direct another member to prepare the AED.
3. Apply the AED as soon as it is available and follow Protocol 2.3. Do not delay compressions to wait for the AED.
4. Provide bag-mask ventilation using the compression-to-ventilation ratio in Protocol 2.4. If an advanced airway is placed by EMS Personnel, provide 1 ventilation every 6 seconds for an adult while compressions continue.
5. An oropharyngeal airway or nasopharyngeal airway is a basic airway adjunct, not a blind-insertion airway device. Use an adjunct only when indicated, within training, and without interrupting compressions.
6. Do not use pulse oximetry to judge CPR effectiveness. Reassess rhythm and pulse only when prompted by the AED or when the patient shows signs of life.
7. Continue until EMS Personnel assume care, the patient shows signs of life, or the scene becomes unsafe.

Chest Pain

4.7

Chest pain or discomfort may represent a heart attack and shall be treated as a time-sensitive emergency. Symptoms may include pressure, squeezing, tightness, fullness, or pain in the chest; shortness of breath; sweating; nausea; dizziness; or discomfort in the arms, back, neck, jaw, or stomach. Symptoms vary among patients and may occur without severe chest pain.

Procedure

1. Keep the patient at rest in a position of comfort. Do not allow the patient to walk unnecessarily.
2. Assess airway, breathing, circulation, mental status, and vital signs. Apply pulse oximetry when available and reliable.
3. Administer oxygen only when the patient is hypoxemic, has significant respiratory distress, shows signs of shock, or otherwise meets Protocol 2.8. Do not give routine high-flow oxygen when oxygenation and breathing are adequate.
4. Request EMS Personnel promptly, obtain a focused history, and provide a clear transfer-of-care report.
5. Place an AED nearby and be prepared for deterioration.
6. If the patient becomes unresponsive, is not breathing normally or is only gasping, and has no definite pulse within 10 seconds, follow the Cardiac Arrest protocol.

Chest Injuries

4.8

1. Monitor the airway
2. Observe spinal injury precautions, if appropriate
3. Administer oxygen
   - *Do not use a demand valve resuscitator due to the possibility of causing severe, life-threatening complications*
4. Monitor breathing for adequacy
5. Control external bleeding
6. For Special Considerations, see below
7. Assess for shock and treat, if appropriate
   - *Decreased breath sounds and muffles heart sounds indicate life-threatening chest injuries. The patient should be transported immediately!*

SPECIAL CONSIDERATIONS

OPEN CHEST WOUND

1. Place an occlusive dressing over the wound and tape on three sides
2. If the patient's condition worsens, remove the occlusive dressing and have the patient fully exhale. Replace and re-tape the occlusive dressing on three sides after exhalation, and request Advanced Life Support intercept if available
3. **Closed Chest Wound**

If the patient's condition worsens, request Advanced Life Support assistance

FLAIL CHEST

1. Apply bulky dressing to the flail segment
2. If the patient's condition worsens, request Advanced Life Support assistance

IMPALED OBJECTS

1. Do **not** remove the object
2. Support and secure the object with bulky dressings

Diabetic Emergencies

4.9

Diabetic emergencies can be classified as hypoglycemia (low blood sugar) or hyperglycemia (high blood sugar). Either can be equally harmful, although in the short term, hypoglycemic patients are easier to identify and treat. The classic signs of low blood sugar include pale skin, sweating, and confusion/altered mental status.

General Care:

- *Emotionally disturbed patients must be presumed to have an underlying medical or traumatic condition causing an altered mental status*
- *Assess such patients for an underlying medical or traumatic condition causing an altered mental status and treat as necessary*

1. Assess the situation for potential or actual danger
   - *All suicidal or violent threats or gestures must be taken seriously*
2. If an underlying medical or traumatic condition causing an altered mental status is not apparent; the patient is fully conscious, alert, and able to communicate; and an emotional disturbance is suspected. See emotionally disturbed patient (X.X)
3. Monitor the airway
4. Observe the spinal injury precautions
5. Administer Oxygen
6. If a low blood sugar level is noted and the patient is conscious, is able to swallow, and is able to drink without assistance, administer glucose orally
   - *Do not give oral solutions to unconscious or patients with head injuries*
7. Request Advanced Life Support assistance
8. Assess and monitor the Glasgow Coma score. Do **not** delay transport

Emotionally Disturbed Patient

4.10

Note: Emotionally disturbed patients must be presumed to have an underlying medical or traumatic condition causing an altered mental status.

Assess such patients for an underlying medical or traumatic condition causing an altered mental status and treat as necessary.

Assess the situation for potential or actual danger and establish a safe zone, if necessary

- *All suicidal or violent threats or gestures must be taken seriously*

1. If an underlying medical or traumatic condition causing an altered mental status is not apparent, the patient is fully conscious, alert, and able to communicate, and an emotional disturbance is suspected, proceed as follows:
    a. Open communications with the patient
    b. Attempt to determine the cause of the immediate crisis
    c. Attempt to obtain a past medical history
    d. Document the exact nature of the problem, including the patient's own words
    e. If EMS Personnel determine that a patient needs care, refuses care, and may have impaired decision-making capacity, Fire Department Personnel shall transfer the matter to EMS Personnel and document the circumstances.

- *Only use the amount of force required to effectively restrain the patient may be used*

Environmental Emergencies

4.11

Environmental emergencies may present in either warm or cold weather, and extreme temperatures are NOT necessary to cause an environmental emergency.

When dealing with cold exposure, extended exposure to relatively mild temperatures may result in hypothermia, especially in the very young or very old.

When dealing with heat emergencies, high exertion in moderately warm temperatures with high humidity may result in a heat emergency. The key difference between heat exhaustion and heat stroke is that in heat exhaustion, sweating is still present and the patient has normal mental status, while heat stroke is defined as the presence of altered mental status. Heat stroke must be must be treated rapidly.

General Care:

- Assess responsiveness, with ABC's
- Administer oxygen, if indicated
- Assess vital signs
- Place patient in position of comfort
- If cold exposure:
    - Remove patient from cool environment/move to a warm environment if possible
    - If clothing is wet and replacement clothing or blankets are available, remove wet clothing
    - Cover the patient with blankets to ensure no additional heat is lost
- If heat exposure:
    - Remove patient from warm environment if possible
    - If altered mental status is not present, initiate passive cooling by removing clothing and cooling the patient with fans, cool mist and/or wet towels
    - If altered mental status is present, initiate active cooling by removing clothing by removing clothing, cooling the patient with fans, and applying ice packs to the groin, armpits, and neck

Epistaxis

4.12

Assessment & Treatment

- Place the patient in a sitting position leaning forward
- Apply direct pressure by pinching the fleshy portion of the nostrils together
- Keep the patient calm and quiet
- Rule out head/neck/spine injuries; see **Head and Spinal Injuries**
    - Bleeding from the nose or ears may occur because of a skull fracture. IF the bleeding is the result of trauma, do not attempt to stop the blood flow. Collect the blood with a loose dressing, which may also limit exposure to sources of infection.
- Be alert and treat for shock, see **Shock**
- Request ALS response

.

General Medical

4.13

Patients with complaints which are not readily identifiable, or which do not fit under any other protocol may be treated under this protocol.

General Care:

- Assess responsiveness, with ABC's
- Consider spinal precautions if indicated
- Administer oxygen if indicated
- Assess vital signs
- Place patient in position of comfort
- Refer to appropriate protocol if other complaints or symptoms are identified

Heat/Cold Related Emergencies

4.14

HEAT RELATED EMERGENCIES

1. Cool the environment or move the patient to a cooler environment.
2. Remove excessive clothing.
3. Administer oxygen.
4. Restrict physical activity.
5. Assess for shock and treat, if appropriate
6. For Special Considerations, see below.
7. Transport.

SPECIAL CONSIDERATIONS

HEAT CRAMPS

Provide water by mouth.

HEAT EXHAUSTION

Provide water by mouth if the patient is conscious, has a gag reflex, and is able to drink without assistance.

HEAT STROKE or EXERTIONAL HEAT ILLNESS

1. Monitor the airway.
2. Cool the patient rapidly.
3. Remove clothing and equipment.
4. Cool athlete immediately by:
    a. Immersing athlete in tub of cold water with ice or ice bags or, if tub is not available,
    b. Place ice bags or ice over as much of the body as possible, cover body with cold towels (replace towels frequently), fan body, or spray with cold water.
5. Monitor ABCs, monitor temperature (core temperature if available) and CNS

6. Cease aggressive cooling when core temperature reaches approximately 101-102º F. Continue to monitor

   - *When observing athletes, look for other signs and symptoms that may indicate they are suffering from exertional heat stroke:*
     - Rectal temperature greater than 104º F (40º C).
     - Irrational behavior, irritability, emotional instability.
     - Altered consciousness, coma.
     - Disorientation or dizziness.
     - Headache.
     - Confusion or just look "out of it".
     - Nausea or vomiting
     - Diarrhea
     - Muscle cramps, loss of muscle function/balance, inability to walk
     - Collapse, staggering, or sluggish feeling.
     - Profuse sweating
     - Decreasing performance or weakness.
     - Dehydration, dry mouth, or thirst.
     - Rapid pulse, low blood pressure, or quick breathing.
     - Other outside factors may include:
       - They are out of shape or obese.
       - It is a hot and humid day.
       - Practice is near the start of the season, and near the end of practice.
       - It is the first day in full pads and equipment.

COLD-RELATED EMERGENCIES

1. Warm the environment or move the patient to a warmer environment.
2. Prevent further loss of body heat.
3. Do **not** allow the patient to smoke or drink either alcohol or caffeinated beverages.
4. For Special Considerations, see below.

SPECIAL CONSIDERATIONS

FROSTNIP, FROSTBITE, FREEZING (Local)

1. Remove clothing from the affected area.
2. Wrap the area in dry, bulky dressings.
3. Do **not** rub the area or rupture blisters.

HYPOTHERMIA (General)

1. Monitor the airway.
2. Begin Basic Cardiac Life Support procedures, if appropriate
   - *Hypothermic patients remain viable for a longer period of time. Therefore, CPR should be initiated on all pulseless and apneic hypothermic patients.*
3. Administer oxygen.
4. Monitor breathing for adequacy.
5. Gently remove any wet clothing.
6. Wrap the patient in dry blankets.
   - *Avoid rough handling of the hypothermic patient to reduce the risk of inducing cardiac arrest*
7. If the patient is conscious, is able to swallow, and is able to drink without assistance, give warm liquids slowly by mouth.
8. If the patient has an altered mental status, request Advance Life Support assistance, if available.

Obstructive Airway

4.15

1. If the patient is conscious and can breathe, cough, speak or cry, encourage coughing
2. If the patient is unconscious or cannot breathe, cough, speak or cry:
    a. Perform obstructed airway clearing procedures in accordance with most recent AHA guidelines.
    b. Request Advanced Life Support assistance if available
3. Continue obstructed airway procedures on route to the hospital until the foreign body is dislodged
    - *The patient must be taken to the hospital for evaluation even if the airway is cleared*

4. If airway obstruction is relieved:
    a. Monitor the airway
    b. Begin Basic Cardiac Life Support procedures
    c. Administer oxygen
    d. Monitor breathing for adequacy

OB Emergencies

4.16

Any pregnant female with non-traumatic abdominal pain should be evaluated. The following pieces of information are important to obtain: Prenatal care, last menstrual period, due date, any recent illnesses or unusual events, prior pregnancies (if so, how many and if any complications), any sensation to push or move bowels, has water broken (if so, when), any contractions or other pains?

General Care:

- Assess responsiveness, with ABC's
- Administer oxygen, if indicated
- Assess vital signs
- Place patient in position of comfort

Emergency Childbirth

- Prepare mother for delivery by placing her supine with legs elevated and knees separated
- Carefully assist newborn from birth canal in its natural progression.
- Apply gentle pressure to the newborn's head to prevent delivery too rapidly and perineal trauma
- After the head emerges, suction the child's airway – mouth first, then nose
- Gently guide the head downward to assist the upper shoulder to deliver
- Gently guide the head upward to assist the lower shoulder to deliver
- Once newborn is delivered, hold the child at close to the same vertical level as the vagina, clamp the cord at 6" and 8" from the navel and cut the cord between the clamps.

Prolapsed Cord/Limb Presentation

- Do not attempt to push cord back in.
- Insert two gloved fingers into the vagina, raise the presenting part of the fetus off the cord and check for cord pulse
- Push baby's head away to keep pressure off cord
- Place mother in knee-chest position.
- Keep pressure off the cord and keep cord moist with sterile saline.

Breach Birth

- Imminent delivery, assist mother in holding legs in flexed position. As infant delivers, support legs, but do not pull.
- Allow entire body to deliver in this manner. As the head passes the pubis, gentle upward traction until mouth appears over the perineum.
- If the head does not deliver, and spontaneous breathing begins, place a gloved hand in the vagina with the palm toward the infants face. Form a "V" on either side of the infant's nose pushing the vaginal wall away from the infants face.

Post-childbirth care

- Suction mouth first, then the nose
- Note the time of delivery, dry and wrap the newborn to preserve body temperature
- Perform an APGAR assessment at 1 and 5 minutes post delivery

- If the placenta delivers, ensure it is transported to the hospital with the mother and newborn

Vaginal Bleeding

- Pre-delivery bleeding should be documented with the gestation time and the presence or absence of pain
- Post-delivery bleeding should be controlled with uterine massage or encouraging the baby to breast feed

Overdose/Poisoning

4.17

Don't become a victim! Ensure the environment is safe prior to approaching the scene!

General Care:

- Assess responsiveness, with ABC's
- If suspected of a Narcotic overdose, administer intranasal Narcan
- Administer oxygen, if indicated
- If patient cannot protect his/her own airway:
    - If breathing is inadequate, provide bag-mask ventilation with an appropriate basic airway adjunct: adults at 10 ventilations per minute; infants and children at 20 to 30 ventilations per minute.
    - If the gag reflex is absent, consider an appropriately sized oropharyngeal airway. Use a nasopharyngeal airway when otherwise indicated and not contraindicated.
- Assess vital signs
- Place patient in position of comfort
- Refer to appropriate protocol if other complaints or symptoms are identified

Specific Care:

- If patient is contaminated with dry chemical, brush off
- If patient is contaminated with a liquid chemical, flush with copious amounts of water
- Consider contacting Poison Control (800-222-1222) for specific instructions
- Look for/bring any pill bottles or medications in the vicinity of the patient

Respiratory Distress

4.18

All patients experiencing respiratory distress should receive supplemental oxygen as appropriate for the amount of distress.

General Care:

- Assess responsiveness, with ABC's
- Administer oxygen only when indicated under the Oxygen Administration protocol.
- Assess vital signs
- Place patient in position of comfort
- Refer to appropriate protocol if other complaints or symptoms are identified
- If respiratory distress is due to an allergic reaction, refer to **Allergic Reaction** protocol
- If respiratory distress is due to suspected cardiac ischemia, refer to **Chest Pain** protocol

Pediatric Respiratory Distress/Arrest

4.19

Respiratory distress in an infant or child may include tachypnea, nasal flaring, retractions, grunting, abnormal breath sounds, anxiety, or difficulty speaking or feeding. Respiratory failure may include decreasing effort, poor air movement, cyanosis, altered mental status, bradycardia, or exhaustion.

Procedure

1. Position the airway and allow a responsive child to remain in the position that best supports breathing.
2. Administer oxygen when hypoxemia or respiratory distress is present. Titrate to clinical response and pulse oximetry when reliable; high-concentration oxygen is not required for every pediatric patient.
3. If breathing is inadequate but a pulse is present, provide bag-mask ventilation at 20 to 30 ventilations per minute, with each ventilation producing visible chest rise.
4. Reassess pulse and breathing at least every 2 minutes. If the heart rate is less than 60 per minute with signs of poor perfusion despite effective oxygenation and ventilation, begin CPR.
5. For CPR, use 30 compressions to 2 ventilations with one rescuer or 15 compressions to 2 ventilations with two or more rescuers. Apply the AED as soon as possible if cardiac arrest occurs.
6. Request EMS Personnel immediately for respiratory failure, cyanosis, altered mental status, bradycardia, apnea, or cardiac arrest.

Avoid excessive ventilation pressure, volume, and rate.

Neonatal Resuscitation

4.20

This protocol applies to a newborn immediately after birth. Effective ventilation is the most important intervention for a newborn who is apneic, gasping, or bradycardic.

Initial Steps

1. Request EMS Personnel and prepare neonatal ventilation equipment.
2. Warm the newborn, dry thoroughly, position the head in a neutral airway position, and provide gentle stimulation. Clear the airway only when secretions or material obstruct breathing.
3. Assess breathing and heart rate. If the newborn is breathing or crying with good tone, provide warmth and ongoing observation.

Ventilation

1. If the newborn is apneic or gasping, or the heart rate remains below 100 per minute after initial steps, begin positive-pressure ventilation within the first minute after birth.
2. Provide 30 to 60 ventilations per minute. Deliver each ventilation over approximately 0.5 to 1 second and adjust pressure to obtain visible chest movement.
3. A rising heart rate is the best sign of effective ventilation. If the heart rate does not increase, correct mask seal, head position, airway obstruction, and ventilation pressure. Do not use blow-by oxygen as a substitute for effective ventilation.

Chest Compressions

1. If the heart rate remains below 60 per minute after at least 30 seconds of ventilation that produces chest movement, begin chest compressions and continue ventilation.
2. Use the two-thumb encircling-hands technique when possible. Coordinate 3 compressions to 1 ventilation for 90 compressions and 30 ventilations per minute.
3. Use 100 percent oxygen during chest compressions when available. If the heart rate rises to 60 or greater, stop compressions and continue ventilation until the heart rate is at least 100 per minute and spontaneous breathing is adequate.

Oxygen and Monitoring

• For a term or late-preterm newborn receiving ventilation, begin with room air when equipment permits. Do not delay effective ventilation to adjust oxygen equipment.
• If supplemental oxygen or respiratory support is used, place a pulse-oximetry sensor on the right hand or wrist when available and titrate oxygen under applicable EMS guidance.
• Expected preductal oxygen saturation rises gradually after birth: approximately 65 to 70 percent at 2 minutes, 70 to 75 percent at 3 minutes, 75 to 80 percent at 4 minutes, 80 to 85 percent at 5 minutes, and 85 to 95 percent at 10 minutes.
• Maintain warmth, reassess continuously, document times and interventions, and transfer care to EMS Personnel.

Seizures

4.21

Patients with a first-time seizure or a seizure associated with fever require prompt assessment by EMS Personnel and transport for further evaluation. An active seizure lasting 5 minutes, or repeated seizures without recovery of consciousness, is a life-threatening emergency.

Assessment of a seizure patient should include the presence of fever, a history of seizures, the duration of seizure, the activity during the seizure (localized or full-body), more than one seizure, any medications being taken, recent trauma (particularly to the head), unusual recent stress.

The patient may be post-ictal and may be unresponsive or have disorientation and combativeness for a period of time after a seizure.

General Care:

- Assess responsiveness, with ABC's
- Administer oxygen only when indicated under the Oxygen Administration protocol.
- Assess vital signs
- Place patient in position of comfort
- Do not attempt to restrain the patient unless required for Fire Department Personnel safety
- Remove objects from the immediate vicinity of the patient to prevent injury

Shock: Non-Trauma

4.22

"Shock" is defined as a reduced blood flow to the tissues of the body, and can be caused by a loss of blood or fluid, anaphylaxis, decreased cardiac output, sepsis, or a neurological disorder. Regardless of the cause, in the BLS pre-hospital environment, the treatment is the same.

Shock can be often be identified by low blood pressure, cool/pale/clammy skin, and altered mental status.

General Care:

- Assess responsiveness, with ABC's
- Administer oxygen only when indicated under the Oxygen Administration protocol.
- Assess vital signs
- If systolic blood pressure is less than 90 and spinal injury is not suspected, place patient in Trendelenburg position by elevating the feet 6-12"
- Prevent heat loss by covering the patient
- If evidence of anaphylaxis reaction is present, refer to **Allergic Reaction** protocol

Shock

4.23

Patient with symptoms of shock/hypoperfusion related to a traumatic injury

Exclusion Criteria:

1. Cardiac Arrest related to trauma
2. Hypotension not related to trauma

Treatment: All Patients

1. C-spine stabilization:
    a. Consider call for ALS if available, but should not delay patient transport
    b. Consider request for air ambulance
    c. Consider rapid extrication
2. Control external bleeding
3. Administer oxygen
4. Spinal immobilization as appropriate
5. Treat specific injuries:
    a. Also follow injury specific trauma protocols if applicable for head injury, impaled object, amputation, or burns. **See** **Head and Spinal Injuries**
    b. If sucking chest wound, cover wound with occlusive dressing sealed on 3 sides. Release dressing if worsened shortness of breath
    c. If intestinal evisceration, cover intestines with a sterile dressing moistened with sterile saline or water; cover the area with an occlusive material (aluminum foil or plastic wrap). Cover the area with a towel or blanket to keep it warm. **DO NOT PUSH VISCERA BACK INTO ADBOMEN**. Transport with knees slightly flexed if possible
6. Maintain body temperature

Stroke/CVA

4.24

A stroke is caused by the lack of blood flow to a particular part of the brain, and may be caused either by a clot in a blood vessel in the brain, or a blood vessel bleeding into the brain. Either case can be life-threatening, and should be identified as quickly as possible; the earlier a stroke is identified, the better chance the patient has of recovery.

Three of the most common signs of a stroke are facial droop, slurred speech, arm drift

General Care:

- Assess responsiveness, with ABC's
- Administer oxygen at 3 LPM via nasal cannula
- Assess vital signs
- If ground transport time is expected to exceed 45 minutes, consult with EMS Personnel and consider air transport

Trauma: General Guidelines

4.25

Administer oxygen as appropriate for patient condition. In the case of a traumatic injury with major bleeding, high-flow oxygen is indicated, but it is not required for minor injuries without associated difficulty breathing.

Apply airway procedures as appropriate for patient condition. In patients with airway and/or breathing compromise, consider managing the airway with an appropriate airway adjunct and BVM. Maintaining circulation and airway are important to the success of patient management.

Spinal motion restriction should be evaluated using the Spinal Motion Restriction protocol. If the patient requires immobilization, the Fire Department Personnel should provide this with a backboard and cervical collar along with webbing, tape, straps, or other mechanism for securing the patient. A complete patient assessment either focused or a “head to toe” should be performed on all patients as time and situation allows.

For critical patients with entrapment or in a situation where ground transport time is expected to exceed 45 minutes, consider air ambulance activation.

Uncontrolled external bleeding or amputation requires application of a tourniquet. Once applied, no not remove the tourniquet.

Amputations

4.26

Early helicopter activation should be considered for all patients who experience a traumatic amputation or degloving injury to give the patient the best chance at re-attachment of the limb.

General Care:

- Assess responsiveness, with ABC's
- Administer oxygen as necessary
- Control bleeding with **Tourniquet Application**
- Consider spinal motion restriction
- Assess vital signs
- Place patient in position of comfort
- If possible, wrap amputated part in a clean, dry dressing, and place on ice; use caution to ensure tissue doesn't come into direct contact with ice

Head and Spinal Injuries

4.27

1. Establish and maintain airway control while stabilizing the cervical spine
   - *Do not use a nasopharyngeal airway in patients with facial injuries or if severe head injury has occurred*

Spinal Immobilization must be considered especially in the following conditions:

a. Altered mental status for any reason, including possible intoxication due to drugs or alcohol
b. GCS <15
c. Complain of, or inability of the Fire Department Personnel to assess for neck and/or spinal pain or tenderness
d. Weakness, paralysis, tingling, or numbness of the trunk or extremities at any time since the injury
e. Deformity of the spine not present prior to the injury
f. Distracting injury or circumstances, including anything producing an unreliable physical exam or history
g. High risk mechanism (axial load such as diving or tackling, high-speed motor vehicle accidents, rollover accidents, falls greater than standing height)
h. Fire Department Personnel concern for potential spinal injury

   - *Once spinal immobilization has been initiated it must not be removed in the pre-hospital setting*

2. If necessary, initiate spinal immobilization, utilize the Rapid Takedown technique **only** if the patient is standing
3. Administer oxygen
4. Monitor breathing for adequacy
   - *Monitor breathing continuously. Be alter for signs of hypoxia and/or increasing respiratory distress*

5. Control external bleeding
6. Assess and monitor the Glasgow Coma Score
7. If the Glasgow Coma Scale (GCS) score is less than 8, ventilate the patient with high concentration oxygen at a rate of 12 breaths per minute for an adult patient and up to 20 breaths per minutes for a pediatric patient
8. If the Glasgow coma Scale (GCS) score is less than 8, and active seizures or one or more of the following signs of brain herniation are present, hyperventilate the patient with high concentration oxygen at a rate of 20 breaths per minute for an adult patient and up to 25 breaths per minute for a pediatric patient
    a. Fixed or asymmetric pupils
    b. Abnormal flexion or extension (neurologic posturing)
    c. Hypertension and bradycardia (Cushing's Reflex)
    d. Intermittent apnea (periodic breathing)
    e. Further decrease in GCS score of 2 or more points (neurologic deterioration)
    - *Do not hyperventilate unless the above criteria are met*

Neck Injuries

4.28

- *Be alert for airway problems and cervical spine injuries*

1. Monitor the airway
2. Observe spinal injury precautions (**See T 2.00**)
3. Administer oxygen
4. Monitor breathing for adequacy
5. Control external bleeding
6. Seal the wound with an **occlusive** dressing. Do **not** bandage completely around the neck
7. Assess for shock and treat, if appropriate see **Shock**

Bone and Joint Injuries

4.29

1. Monitor the airway
2. Administer oxygen, if appropriate
3. Control external bleeding. Avoid excessive pressure over injury sites
4. Assess for shock and treat, if appropriate
5. Manually stabilize the injury
6. Cover protruding bones and associated wounds with dry, sterile dressings
7. Immobilize the injury
   - *Check for peripheral (distal) pulses, motor function, and sensation in the injured extremity before and after immobilization*
     a. Angulated long bone deformities should be straightened, provided resistance is not felt, into a splintable position
     b. Joints above and below the deformity should be immobilized
     c. A deformed joint should be immobilized in the position found, unless it cannot be effectively immobilized in this position
     d. A traction splint is the splint of choice for all isolated closed femur fractures
     e. Elevate the injury site, if possible
   - *Splinting should not delay transport of the critical or unstable patient*

Soft Tissue Injuries

4.30

- *Infection control precautions must be followed when making contact with the patient's blood or secretions*

1. Monitor the airway
2. Administer oxygen, if appropriate
3. Control external bleeding. If a severe extremity hemorrhage cannot be controlled by direct pressure, apply a tourniquet.
4. Assess for shock and treat if appropriate **see** **Shock**
5. For Special Considerations, see below

SPECIAL CONSIDERATIONS

IMPALED OBJECT

1. Do **not** remove the object
2. Support and secure the object with bulky dressings
   - *If the object is impaled in the cheek and is compromising the airway, remove it and bandage both sides of the wound*

AMPUTATED OR COMPLETELY AVULSED TISSUE

1. Wrap the part in a **saline-moistened, sterile** dressing. Do **not** soak
2. Place the part into a plastic bag and seal the bad
3. Label the bad with the patient's name and time of injury
4. Place the bag in ice, or a cooled area
5. Protect the stump with a **saline-moistened**, sterile dressing
   - *Avoid freezing the tissue. Do not use dry ice.*

Burns

4.31

Early helicopter activation should be considered for all patients with 2nd or 3rd degree burns which meet the following criteria:

- Hands, feet, face, or genitals
- Encircling the chest
- More than 20% of the body

General Care:

- Assess responsiveness, with ABC's
- Administer oxygen as necessary
- Assess vital signs
- Stop the burning process and remove the patient from the source of the injury, if safe to do so.
- Dress wounds:
  - 2 nd or 3 rd degree < 10% BSA use **wet** sterile dressing
  - 2 nd or 3 rd degree > 10% BSA use **dry** sterile dressing
- Remove any items that may cut off circulation with swelling. Do not remove items that have bonded with skin; cut from around these areas.
- Cover the patient to maintain body heat

Electrical Burns:

- Identify potential entry and exit wounds

Chemical Burns:

- Brush off dry chemical and flush with copious amounts of water
- Flush other chemicals with copious amounts of water
- Eyes should be flushed for a minimum of 20 minutes.

1. "Rule of Nines" (see Figure 1)

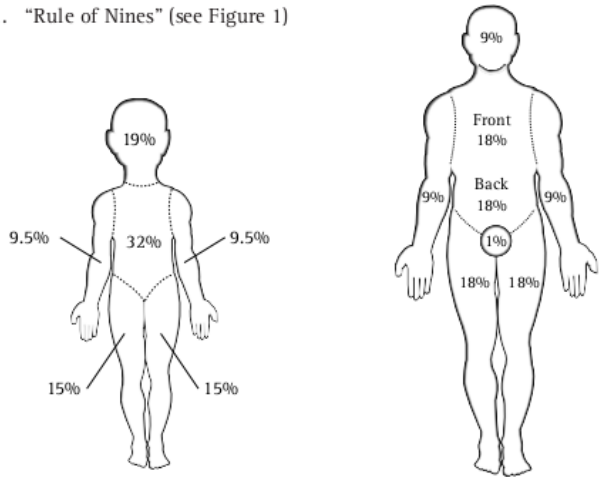


Figure 1. Rule of Nines

Eye Injuries

4.32

Any injury to the eye, other than burns, should be treated under this protocol.

General Care:

- Assess responsiveness, with ABC's
- Apply oxygen as necessary
- Assess vital signs
- Place patient in position of comfort

Specific Care:

- Open eye injury: cover both eyes
- Chemical burns: flush continuously with water or normal saline
- Impaled object: stabilize object in place and cover both eyes

Musculoskeletal Injuries

4.33

General Care:

- Assess responsiveness, with ABC's
- Apply oxygen as necessary
- Assess vital signs
- Place patient in position of comfort

Specific Care:

- Assess pulse, motor, and sensation distal to the injury
- Do not attempt to reduce dislocations
- Splint injured extremities in the position found or position of comfort
- An ice pack may be applied to reduce swelling

Submersion Injuries/Near Drowning

4.34

Drowning is defined as death secondary to submersion; near drowning is defined as a submersion accident with the recovery of vital signs and survival greater than 24 hours after the incident. Additional factors in drowning or near drowning patient are trauma secondary to surface impacts, spinal cord injuries, orthopedic and tissue injuries, etc. Survival is based on early access and aggressive management of these patients. Helicopter activation should be considered in near-drowning patients.

General Care:

- Assess responsiveness, with ABC's
- Initiate or continue CPR if indicated
- Administer oxygen only when indicated under the Oxygen Administration protocol.
- If breathing is inadequate, provide bag-mask ventilation with an appropriate basic airway adjunct: adults at 10 ventilations per minute; infants and children at 20 to 30 ventilations per minute.
- Use an appropriately sized oropharyngeal or nasopharyngeal airway when indicated and not contraindicated, while minimizing interruptions in chest compressions.
- Do not use pulse oximetry to judge CPR effectiveness. Follow the AED prompts and reassess rhythm and pulse only at the designated CPR cycle checks.

Appendix

Appendix A

Exposure Procedure/Needle stick

If an exposure occurs and the source patient can be identified

If an employee should be exposed specifically to the eye, mouth, or other mucous membrane, non-intact skin, or parenteral contact with blood or OPIM.

- Report the incident to the Chief ASAP and notify the infectious control officer.
- Should infectious control officer not be available the Fire Officer will act on his/her behalf.
- An exposure form must be filled out ASAP and attempts to discover the source potential for infectious disease (i.e. HIV positive, hepatitis, homosexuality, blood transfusion, I.V. drug use).
- Brookland Fire Department shall make post-exposure evaluation and follow-up available to exposed Fire Department Personnel and maintain confidential records under the Brookland Fire Department exposure-control plan.
- Brookland Fire Department shall arrange confidential post-exposure evaluation, testing, preventive treatment, and follow-up under its exposure-control plan. Information shall be released only as permitted by law and Brookland Fire Department policy.
- Consent forms must be signed to draw blood for lab studies.
- Samples can be put on hold for 90 days.
- Lab samples should be drawn within 24 hours or ASAP.
- All available post-exposure results shall be provided confidentially to the exposed member of Fire Department Personnel.
- Counseling will be available as needed.
- Each employee is responsible to report any significant exposure.
- Follow-up evaluation and testing shall be provided according to the current Brookland Fire Department exposure-control plan and current clinical recommendations.
- Should the source individual refuse screening the exposure shall be handled as an unknown source exposure.
- Peer review forms will be filled out and peer review conducted on all exposures. This procedure is done in an attempt to identify unsafe work habits and prevent future incidents. Students are included in these criteria also.

If the source individual cannot be identified, Brookland Fire Department shall arrange evaluation, testing, preventive treatment, and follow-up for the exposed member of Fire Department Personnel under the Brookland Fire Department exposure-control plan.

Records

- Will be kept on file at Brookland Fire Department
- Said records will be kept confidential
- Will be available to the Responder upon written request after signing a release form
- Should Brookland Fire Department cease to do business every effort will be made to return the records to the employee

Appendix B

Aeromedical Evacuation

Aeromedical (helicopter) transport of patients should be considered in the following situations if and when such services are required to get the following patients to the nearest appropriate facility in a more expedient manner than is available by ground transport and/or when a higher level of pre-hospital care is required that is unavailable by EMS Personnel:

a. Multisystem blunt or penetrating trauma with unstable vital signs:
   1. altered mental status (due to trauma)
   2. hemodynamic compromise
   3. uncorrected respiratory compromise
   4. GCS < 8

b. Acute penetrating trauma to the head, neck, torso or groin
c. High degree and/or high BSA burn as well as circumferential burns and burns to face and genitalia
d. Paralysis or spinal cord injury
e. Flail or crushed chest
f. Amputation with possession of body part and potential for re-attachment
g. MVA roll-over with ejection from vehicle
h. Fall > 2 times patient height
i. Suspected CVA if time zero < 3 hours with at least one neurological deficit in CPSS
j. ACS with STEMI
k. Near-drowning
l. MCI red-tag patients
m. When MOI provokes Index of Suspicion of potential life-threatening injuries

Procedure for contacting aeromedical transport:

* Incident commander / charge EMS Personnel makes decision to utilize aeromedical transport
* Fire Department Personnel provide the patient's condition, chief complaint, and location through Brookland Fire Department communication procedures.

General Helicopter Safety

* LZ must be marked 100’x100’, level, firm, clear of debris and overhead obstructions
* Only personnel trained in helicopter scene safety is permitted to approach helicopter and assist
* Obey any and all instructions from the pilot
*Approach the helicopter only at an angle visible to the pilot from the side only
* Do not stand on skids or enter the helicopter cockpit or patient area

Appendix C

Mass Casualty Incidents

Purpose

This appendix establishes the Brookland Fire Department procedure for recognizing, organizing, triaging, treating, tracking, and transferring patients during a Mass Casualty Incident (MCI). It applies to Fire Department Personnel and coordinates medical operations with EMS Personnel.

Mass Casualty Incident Activation

An MCI is any incident in which the number, severity, location, or needs of patients exceed—or may soon exceed—the immediately available capability of Fire Department Personnel and EMS Personnel, requiring organized triage, treatment, transport, and resource management.

The first qualified member of Fire Department Personnel or EMS Personnel who recognizes an MCI shall announce the condition through Brookland Fire Department communication procedures and establish incident command. An exact patient count is not required before activation.

Initial Actions

1. Confirm scene safety, identify hazards, select a safe approach, and establish an initial command location.
2. Provide an initial MCI report containing the exact location, incident type, known hazards, safest access and exit routes, estimated number and severity of patients, and resources immediately needed.
3. Declare the MCI level or operational need under Brookland Fire Department procedures and request additional Brookland Fire Department resources and EMS Personnel.
4. Establish a single incident command structure and identify the person serving as Incident Commander.
5. Identify a casualty collection point and, when space permits, separate triage, treatment, transportation, and staging areas in a safe location with controlled access.
6. Begin rapid primary triage. Do not allow treatment of one patient to delay organization and triage of the remaining patients unless an immediate lifesaving intervention can be completed rapidly.

Command and Medical Organization

• Incident Commander: Has overall responsibility for safety, objectives, resource assignments, communications, and coordination. The Incident Commander may appoint the following functions as staffing permits.
• Medical Group Supervisor: The most qualified available member of Fire Department Personnel or EMS Personnel assigned to coordinate triage, treatment, transport, and patient tracking.
• Triage Unit Leader: Directs primary and secondary triage, assigns triage categories, marks patients, and coordinates movement to treatment areas.
• Treatment Unit Leader: Establishes treatment areas, assigns personnel and supplies, ensures reassessment, and prepares patients for transport.
• Transport Unit Leader: Normally assigned to EMS Personnel; coordinates patient-loading priority, available transport resources, destination decisions under applicable EMS procedures, and departure records.
• Patient Tracking: Records patient identifiers, triage category, treatment area, transport resource, departure time, and destination.
• Staging: Maintains accountability and assigns arriving Brookland Fire Department resources and EMS Personnel only when requested by command.

When staffing is limited, one person may perform more than one function. Functions shall be separated as soon as resources allow.

Scene Layout

• Command Post: Located in a safe area with good access, visibility, and communications.
• Triage Area: The casualty location or collection point where rapid initial sorting occurs.

• Treatment Areas: Separate areas for Immediate/Red, Delayed/Yellow, and Minor/Green patients. Establish an Expectant/Deceased area when needed, separated from active treatment areas.
• Transportation Area: A controlled loading point with a single entry and exit route when practical.
• Staging Area: A location where unassigned resources remain available without blocking access or transport routes.

Primary Triage Principles

Use START for patients who have reached puberty and JumpSTART for younger children unless Brookland Fire Department has adopted another approved MCI triage method. Use the same method consistently throughout the incident.

Perform only rapid lifesaving interventions that are within scope, use immediately available equipment, can be completed in less than approximately 1 minute, and do not require Fire Department Personnel to remain with one patient.

Rapid interventions may include controlling life-threatening external bleeding, opening or positioning the airway, placing an appropriate basic airway adjunct, and providing the JumpSTART ventilations described below.

Triage Categories

• Immediate/Red: Life-threatening condition that may be survivable with immediate intervention and priority transport.
• Delayed/Yellow: Serious injury or illness requiring care and transport, but a short delay is unlikely to immediately threaten survival.
• Minor/Green: Walking or minimally injured patient who can follow directions and whose condition is unlikely to deteriorate rapidly.
• Expectant or Deceased/Black: No signs of life after the airway and pediatric ventilation steps required by the triage method, or injuries that cannot be survived with the resources currently available. Provide respectful care and reassess if resources or conditions change.

Adult Primary Triage - START

1. Direct all patients who can walk to a designated safe location. Initially categorize them as Minor/Green and reassess them later.
2. For a nonwalking patient, check breathing. If absent, open and reposition the airway once. If breathing begins, categorize Immediate/Red. If breathing remains absent, categorize Expectant or Deceased/Black.
3. If the respiratory rate is greater than 30 per minute, categorize Immediate/Red.
4. If the respiratory rate is 30 or less, assess perfusion. Absence of a radial pulse or other evidence of severely impaired perfusion requires Immediate/Red categorization after rapid control of major bleeding.
5. If perfusion is adequate, assess mental status. Inability to follow a simple command requires Immediate/Red categorization. A patient who follows commands is Delayed/Yellow unless another immediate threat is present.

Pediatric Primary Triage - JumpSTART

1. Direct children who can walk to a safe location and initially categorize them as Minor/Green. Infants and children carried to that location require individual assessment and shall not automatically be categorized Green.
2. For a nonwalking child, check breathing. If absent, open and reposition the airway.
3. If breathing remains absent, check for a palpable pulse. If no pulse is present, categorize Expectant or Deceased/Black.
4. If a pulse is present but breathing remains absent, provide 5 ventilations. If breathing begins, categorize Immediate/Red. If apnea continues, categorize Expectant or Deceased/Black.
5. If spontaneous breathing is present and the respiratory rate is less than 15 or greater than 45 per minute, categorize Immediate/Red.

6. If the respiratory rate is 15 to 45, assess perfusion. Absence of a palpable pulse requires Immediate/Red categorization.
7. If perfusion is present, assess neurologic response. Unresponsiveness, inappropriate response to pain, or abnormal posturing requires Immediate/Red categorization. An appropriate response is Delayed/Yellow unless another immediate threat is present.

Tagging and Patient Movement

• Attach a triage tag, tape, ribbon, or other approved marker to every patient as soon as practical. Record the category, time, initials of the person performing triage, and any rapid intervention.
• Do not remove an earlier triage marker. If the category changes, clearly update the tag and record the new category and time.
• Move Immediate/Red patients first when movement is safe, followed by Delayed/Yellow and Minor/Green patients as directed by the Triage Unit Leader.
• Patients shall be reassessed after movement, while awaiting treatment, after any intervention, and whenever their condition changes.

Treatment Areas and Reassessment

• The Treatment Unit Leader shall establish clearly marked Red, Yellow, and Green treatment areas and assign Fire Department Personnel and EMS Personnel according to patient needs and certification level.
• Treatment shall focus on airway support, ventilation, hemorrhage control, shock prevention, spinal-motion restriction when indicated, protection from the environment, and other care within applicable protocols.
• Patients shall remain tagged and visible. Supplies shall be placed where they do not obstruct patient movement or transportation routes.
• Secondary triage shall occur in the treatment area. Transport priority may change as patients improve, deteriorate, or additional resources become available.

Transport Operations

• No patient shall leave the MCI through organized transport without being logged by Patient Tracking or the Transport Unit Leader unless an immediate life threat makes documentation impossible.
• EMS Personnel shall determine transport destination and transport order under applicable EMS procedures, informed by triage category, patient needs, available capability, and travel time.
• Load Immediate/Red patients according to clinical priority, followed by Delayed/Yellow patients. Minor/Green patients shall remain in the designated area until released or transported under the MCI plan.
• Provide a concise transfer report including patient identifier, triage category, major findings, vital signs when available, and care provided.

Communications

• Use plain language and the communication assignments established by the Incident Commander. Avoid unnecessary radio traffic.
• Medical status reports should include the estimated total patient count and current numbers in each triage category, unmet needs, hazards, and transport progress.
• Fire Department Personnel and EMS Personnel shall report only to their assigned supervisor and shall not self-deploy or change assignments without approval except to address an immediate safety threat.

Patient Tracking and Documentation

• Record, when available: patient name or temporary identifier; approximate age and sex; triage category and changes; major findings; treatments; transport resource; departure time; destination; and the EMS Personnel accepting care.
• Maintain a running count of patients by category and reconcile that count before demobilization.
• Each member shall complete Brookland Fire Department reports required for the assignment. Command documentation shall identify major decisions, resource requests, and changes in incident

status.

Special Considerations

• Hazardous or contaminated scenes: Fire Department Personnel and EMS Personnel shall not enter an unsafe area without appropriate training, protective equipment, and authorization. Establish contaminated-patient control and decontamination under Brookland Fire Department procedures before movement into clean treatment areas.
• Violence or active threat: Stage in a safe location and follow Brookland Fire Department scene-safety procedures. Medical operations begin only in areas confirmed safe enough for the assigned protection level.
• Children and separated families: Keep children with a responsible caregiver when safe and medically appropriate. Record caregiver and separation information in patient tracking.
• Expectant or deceased patients: Preserve dignity, limit unnecessary movement, document location and identification, and prevent commingling with active treatment areas.

Demobilization and Recovery

1. The Incident Commander may begin demobilization after all patients are accounted for, transported, released, or transferred; hazards are controlled; and remaining medical needs are assigned.
2. Recover and inventory equipment, replace used supplies, clean or isolate contaminated equipment, and report damaged or missing items.
3. Complete patient tracking, incident reports, exposure reports, and command documentation before records are closed.
4. Conduct a structured post-incident review to identify what occurred, what worked, what requires correction, and who is responsible for follow-up.
5. Provide post-incident support to involved Fire Department Personnel under Brookland Fire Department policy.

Readiness

• Brookland Fire Department should maintain an MCI cache containing triage tags or markers, role-identification vests, treatment-area markers or tarps, patient-tracking materials, hemorrhage-control supplies, airway and ventilation equipment, personal protective equipment, and documentation supplies.
• Fire Department Personnel should train on MCI command, START/JumpSTART triage, communications, patient tracking, and equipment deployment at least annually and after material changes to this appendix.

Appendix D

Equipment Cleaning

General:

Brookland Fire Department will maintain equipment in a clean and updated operational manner to prevent the spread of contaminants and ensure the proper use of such.

Procedure:

All non-disposable equipment will be wiped down and cleaned with an antimicrobial solution after each patient use, including personal stethoscopes. All disposable equipment will be replaced after each patient use. Utilize manufacturer guidelines and suggestions for cleaning of all bio-medical equipment and report any unusual findings, faults or damage of equipment to your supervisor

Appendix E

EMERGENCY MEDICAL APPLICATION TOURNIQUET

Purpose

To provide a standardized method for controlling life-threatening extremity bleeding with a Brookland Fire Department-approved commercial tourniquet.

Indications

Life-threatening bleeding from an arm or leg that is not controlled by direct pressure, cannot be reached or maintained with direct pressure, or requires immediate tourniquet placement because of amputation, multiple casualties, entrapment, or an unsafe environment.

Application

1. Expose the limb when practical. Identify the bleeding site.
2. Place the tourniquet 2 to 3 inches above the wound and not over a joint. If the wound cannot be located quickly, place it high on the injured limb.
3. Route and tighten the strap according to the manufacturer's instructions. Remove all slack before turning the windlass.
4. Turn the windlass until bleeding stops. Secure the windlass and remaining strap.
5. If bleeding continues, apply a second commercial tourniquet immediately above and next to the first.
6. Record the application time on the device, triage tag, and patient report. Leave the tourniquet fully visible.
7. Reassess for recurrent bleeding during movement and transfer. Tighten or add a second tourniquet if bleeding resumes.
8. Transfer care to EMS Personnel and clearly report the tourniquet location, time, number of devices applied, and bleeding response.

Safety and Precautions

- Do not loosen, release, or remove the tourniquet after application. Removal is the responsibility of EMS Personnel operating under applicable EMS protocols.
- Do not place a tourniquet over a joint, directly over the wound, or over bulky objects in clothing.
- Pain after application is expected and is not a reason to loosen an effective tourniquet.
- Do not cover the tourniquet with clothing, blankets, or dressings.
- Use a commercial windlass tourniquet whenever available. An improvised device requires appropriate training and shall use a band at least approximately 2 inches wide with a rigid windlass.
- Commercial tourniquets may be used on children when the approved device fits the limb and stops bleeding. Do not use a fixed patient-weight cutoff as the sole reason to withhold treatment.