

JOHNSON COUNTY

FIRST RESPONDER / EMT-B PROTOCOLS

(INCLUDING PEDIATRIC)

**BASED ON;
IOWA DEPARTMENT OF PUBLIC HEALTH
BUREAU OF EMERGENCY MEDICAL SERVICES
PROTOCOLS**

Revised 08-2007

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1/01 PROTOCOLS

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The purpose of protocols in the out-of-hospital setting is to assure safe and effective intervention during the out-of-hospital phase of patient care. In consideration of the unique resources, needs, population, and geography of individual service programs in Iowa, physician medical directors may choose to enhance or omit portions of these protocols in accordance with Iowa Code, Chapter 147A. Medical directors are responsible to ensure that EMS personnel use protocols, have the training and skills required, and perform Continuous Quality Improvement.

Regardless of EMS provider level of certification, use of skills in the out of hospital setting are limited to the EMS provider's scope of practice and EMS service program's level of authorization in accordance to the skills and protocols approved by the physician medical director. The service program medical director must determine what skills within the level of service authorization and provider scope of practice are to be included and also which, if any, are not included for individual EMS services. **The "Iowa EMS Scope of Practice" document, adopted by reference to the administrative rules outlines skills by certification level. It is available on the Bureau of EMS website, or by contacting the Bureau of EMS.**

Protocols are essential to assure education, training, and standards of care meet the needs of patients. Ongoing review and update of protocols is necessary to keep pace with interventions known to be effective in out-of-hospital care. The challenge is for all EMS providers, out of hospital and in hospital, to keep current with the protocols so the EMS continuum of care can effectively reduce suffering, disability, death and costs from life-threatening illness and injury.

It is the intent of the Protocol Committee and the Iowa EMS Advisory Council that these protocols will serve as a standard throughout Iowa's EMS system. According to Iowa Administrative Code 641-132.9(2)(a) individual physician medical directors duties include *"developing, approving, and updating protocols to be used by service program personnel that meet or exceed the minimum standard protocols developed by the department."* Additionally, according to 641-132.8(3)(b) service programs shall *"utilize department protocols as the standard of care. The service program medical director may make changes to the department protocols provided the changes are within the EMS provider's scope of practice and within acceptable medical practice. A copy of the changes shall be filed with the department."*

The following authorization page and any changes or revisions made by the EMS service medical director must be on file with the State EMS System Coordinator.

PROTOCOL AUTHORIZATION

AUTHORITY:

According to Iowa Code, Chapter 147A, emergency medical personnel may only deliver emergency medical care under the direction of a physician medical director who is licensed to practice medicine in Iowa. The medical practice of Out-of-Hospital personnel is an extension of the medical director's license.

Protocols shall be approved, signed, and dated by the individual service's medical director prior to implementation. Any changes must be on file with your State EMS Regional Coordinator. Skills must be within the level of service authorization and EMS provider scope of practice.

The Service Physician Medical Director Must Approve The Protocol In Accordance With The Authorized Level Of Service.

_____ Service Program Name

_____ Ambulance _____ CCT Endorsement
 _____ Non-transport

- A. Level of Staffing:**
 _____ Ambulance TA(Transport Agreement)
 _____ Minimum _____ 24/7

- B. Level of Authorization:**
 _____ Basic (no defibrillation or combitube)
 _____ First Responder
 _____ EMT-B
 _____ EMT-I
 _____ EMT-P
 _____ EMT-P/CCT (attach protocol)
 _____ PS
 _____ PS/CCT (attach protocol)

- C.** These protocols are to be considered a standing order. Radio communications are not required prior to performing any protocol action. EMT's/Paramedics should call in for further direction or confirmation of orders whenever the situation warrants.

YES NO

- D.** The emergency medical care provider present with the highest level of certification (on the transporting service) shall

determine, based upon patient care needs, the appropriate level of provider to attend the patient during transport.

YES NO

**E. APPROVAL OF SKILLS AND TRAINING LEVEL
 (Physician Medical Director must approve skills)**

CIRCLE MINIMUM

| | | | |
|--|-----|----|-------------|
| Initiation of organ donation | YES | NO | FR |
| Esophageal/tracheal/double-lumen airway | YES | NO | FR |
| MAST/PASG | YES | NO | Basic |
| IV maintenance | YES | NO | EMTB |
| Glucose Monitor (Auto-lance for EMT-B) | YES | NO | EMTB |
| Epinephrine Auto-Injector Pen | YES | NO | EMT-B,EMT-I |
| Gastric Tube Insertion | YES | NO | EMT-I |
| Needle Thoracostomy | YES | NO | EMT-P |
| Nasogastric Tube Insertion | YES | NO | EMT-P |
| Urinary Catheterization | YES | NO | EMT-P |
| Intraosseous Infusion | YES | NO | EMT-P |
| Needle Cricothyrotomy | YES | NO | EMT-P |
| RSI (attach protocol) | YES | NO | PS |
| Nasotracheal Intubation | YES | NO | PS |
| EKG Interpretation (multi lead or 12 lead) | YES | NO | PS |
| Thrombolytics (attach protocol) | YES | NO | PS |
| Assessment-based Spinal Immobilization | YES | NO | PS |

Physician Medical Director's Name (please print)

 Physician Medical Director's Signature

 Date

INITIAL PROTOCOL (S) FOR ALL PATIENTS:

All emergency care providers should start at the left hand side of the page and proceed as far as your level of certification permits.

Always observe the following precautions (I. & II.) and only then perform the patient assessment and obtain the necessary information on all patients:

I. Scene Size-Up: As you approach the scene, assure safety for yourself and the patient. If incident is result of Hazardous Materials, do not enter the scene unless trained and equipped, and in compliance with O.S.H.A. Establish and follow Incident Command. If scene is "suspect", determination of safety of scene shall be made by the Fire Chief. Obtain additional help prior to contact with patients such as law enforcement, fire and utilities.

II. BSI (Body Substance Isolation): Prior to patient assessment, employ precautions to prevent contact with potentially infectious body fluids or materials.

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

Assess Patient's Mental Status. Keep patient quiet and do not let them move.

Begin by speaking to the patient. State name, tell the patient that you are a First Responder / EMT, and explain that you are here to help.

A. Assess the Patient's Airway Status.

1. Responsive patient - assess for adequacy of breathing.
2. Unresponsive patient -check for and maintain open airway.
 - a. Position the patient according to age and size.
 - b. Trauma patients or those with unknown nature of illness, the cervical spine should be stabilized/immobilized and the jaw thrust maneuver performed as indicated.
3. Suction airway as needed.

B. Assess the Patient's Breathing.

1. If breathing is adequate and the patient is responsive, oxygen may be indicated.
2. All responsive patients breathing > 29 breaths per minute or < 10 breaths per minute should receive high flow oxygen (defined as a 10-15 LPM nonbreather mask).
3. If the patient is unresponsive and the breathing is adequate, provide high concentration oxygen.
4. If the breathing is inadequate, assist the patient's breathing and utilize ventilator adjuncts, and high flow oxygen. Recent research in children has shown that artificial respiration using a basic airway saves the lives of children as well as the more risky intubation procedure. The end tidal CO2 detector or esophageal detection device are to be used on all patients with combi-tube in place.
5. If the patient is not breathing, ventilate using ventilatory adjuncts and high flow oxygen.
6. COPD patients:
 - a. If in no distress, administer oxygen by NC (usually 1-2 LPM).
 - b. If in distress, use high flow oxygen by mask and be prepared to use ventilator adjunct.
7. If utilizing pulse oximetry, titrate oxygen delivery to keep oxygen saturation greater than 90 percent.

C. Assess the Patient's Circulation.

1. Check for pulse. If absent begin CPR.
2. Check for major bleeding. If present, control.
3. Check perfusion by evaluating skin color and temperature.

D. Poisoning- See poisoning Protocol pp.20

IV. Assess the patient and determine if the patient has a life threatening condition.

- A. If a life threatening condition is found, treat immediately.**
- B. Assess nature of illness or mechanism of injury.**

V. Identify Priority Patients.

A. Consider:

1. Poor general impression
2. Unresponsive patients - no gag or cough
3. Responsive, not following commands
4. Difficulty breathing
5. Shock (hypoperfusion)
6. Complicated childbirth
7. Chest pain with BP < 100 systolic, or suspected M.I.
8. Uncontrolled bleeding
9. Severe pain anywhere
10. Acute brain attack
11. Syncope

VI. COMMUNICATIONS

A. Give Patient report to responding ambulance:

1. Identify service.
2. Number of patients, patient status and level of consciousness.
3. Patient's chief complaint, and your physical assessment findings and vital signs.
4. Treatment given, and patient's response and present status.

B. Advise responding ambulance of changes occurring in patient status

C. Give as much written information as possible to the responding ambulance personnel to ensure continuity of patient care. Finish written run report upon completion of call.

D. Notify dispatch when assignment is completed. Clean, restock, and check equipment / vehicle for next assignment.

VII. OTHER

- A. Consider having a Critical Incident Stress Debriefing (CISD) anytime rescuers and health care providers have been involved in a major incident, or one which produces adverse reaction.**
- B. Remember the importance of patient confidentiality. Responders should never discuss a patient's condition, treatment, or prognosis except as required by ones job. Any necessary discussion should take place in private so that unauthorized persons will not hear the discussion.**
- C. You may need to use more than one protocol for any single patient.**

ABDOMINAL PAIN

Initial Treatment Protocol

I. GENERALIZED ABDOMINAL PAIN

- A. Follow Initial Protocols For All Patients:
- B. Emergency Medical Care:
 - 1. If medical emergency, refer to appropriate protocol.
 - 2. If trauma emergency, refer to appropriate protocol.
 - 3. Administer high flow oxygen
 - 4. Keep the patient lying still.
 - 5. BE ALERT for vomiting.
 - 6. Give nothing by mouth.
- C. Consider injury related pain and refer to appropriate protocol, or treat for SHOCK if indicated. Give nothing by mouth.
- D. Position patient in a comfortable position. BE ALERT for vomiting.

Special Considerations

Children experience blunt trauma to the abdomen more often than do adults. In fact, this is often a site of hidden injury. Keep in mind the possibility of a serious abdominal injury when treating children.

Pediatric

Be prepared to treat respiratory compromise.

EMT-B

Follow Initial treatment protocol.

**ALLERGIC REACTION
(ACUTE) / ANAPHYLAXIS**

Initial Treatment Protocol

I. ALLERGIC REACTION

- A. Follow Initial Protocols For All Patients:
- B. Emergency Medical Care:
 - 1. Look for medical alert device.
 - 2. Look for patient's medications, and give them to the ambulance personnel.
 - 3. Be prepare to initiate Basic Cardiac Life support measures.
 - 4. Administer high flow oxygen.

EMT-B

- 1. Determine if patient has prescribed preloaded epinephrine available.
- 2. If patient does not have epinephrine auto-injector available - follow initial care protocol.
- 3. Contact medical direction for order to facilitate administration of preloaded epinephrine.
- 4. Reassess in two minutes.
- 5. Record reassessment findings.
- 6. If condition fails to improve or remains unstable contact medical direction for order to give additional dose of epinephrine.
- 7. Treat for shock (hypoperfusion) if present.
- 8. If patient is unconscious and pulseless, proceed with the cardiac arrest protocol.

Pediatric

Follow Initial Treatment Protocol.

**ALTERED MENTAL STATUS
WITH A HISTORY OF
DIABETES**

Initial Treatment Protocol

**I. CONSCIOUS DIABETIC
PATIENT:**

- A. Follow Initial Protocols For All Patients:
- B. Emergency Medical Care:
 - 1. Determine if patient can swallow
 - 2. Administer one tube of oral glucose between cheek and gum.
 - 3. Monitor airway closely.

**II. UNCONSCIOUS DIABETIC
PATIENT:**

- A. Follow Initial Protocols For All Patients:
- B. Emergency Medical Care:
 - 1. Open and maintain patent airway.
 - 2. Administer oxygen per NRB at 15 LPM. Or assist ventilation's as needed.

Special Considerations

Children who have diabetes are more at risk for medical emergencies than adults. Children are more active than adults and may exhaust blood sugar levels by playing too hard, especially if they have taken their prescribed insulin.

Children are also less likely to be disciplined about eating correctly and on time. As a consequence, children are more at risk of hypoglycemia than are adults.

Pediatric

Follow Initial Treatment Protocol

EMT-B

Follow initial care protocol.
Consider glucose check if available.

AMPUTATED PART

Initial Treatment Protocol

- I. Follow initial protocol for all patients:
- II. Emergency Medical Care:
 - A. Control bleeding.
 - B. Treat for shock.
 - C. Follow trauma protocol as indicated.
- IV. Care of amputated part:
 - A. Locate and preserve the amputated Part.
 - 1. Wrap amputated part in gauze moistened with saline.
 - 2. Place the part in a plastic bag.
 - 3. Place the plastic bag containing the part in a larger bag or container with ice and water.
 - a. Do not use ice alone.
 - b. Do not use dry ice.
 - 4. Label with name, date and time.
 - 5. Give to ambulance personnel to be transported WITH the patient

Special Considerations

Most extremity parts can be reattached, such as arms, ears, fingers, feet, toes, hands, legs, nose, penis and scalp. Optimal results are obtained when implantation occurs within a few hours of the injury.

Pediatric

Follow Initial Treatment Protocol.

EMT-B

Follow trauma protocol as indicated.

APPARENT DEATH

Initial Treatment Protocol

I. DETERMINATION OF APPARENT DEATH:

- A. Follow Initial Protocols For All Patients:
- B. If apparent death is confirmed above:
 - 1. The county Medical Examiner and law enforcement shall be contacted. Call Johnson County SO.
 - 2. Follow local protocol, remain at the scene until the arrival of the ambulance service, law enforcement or the medical examiners office.
 - 3. Provide psychological support for grieving survivors.
 - 4. Document reason no resuscitation was initiated.
 - 5. Consider deceased a possible organ donor, and follow guidelines as approved by medical director.
- C. Preserve crime scene, if present.

Special Considerations

Apparent death indications are as follows:

Conclusive signs of death include; the presence of rigor mortis, putrefaction, complete separation of body parts incompatible with life (e.g. decapitation ect,)

There is Physical Decomposition of the body.

Pediatric

Follow Initial Treatment Protocol.

EMT-B

No special protocol needed.

BEHAVIORAL EMERGENCIES

Initial Treatment Protocol

I. PSYCHIATRIC PATIENT:

- A. Follow Initial Protocols For All Patients: (BE ALERT for your own safety!)
- B. Emergency Medical Care:
 - 1. Evidence of immediate danger:
 - a. Protect yourself and others by summoning law enforcement to assure everyone's safety; and, if necessary, to enable you to render care.
 - b. Assess and consider medical/trauma causes and treat with appropriate protocol(s).
 - c. Detailed Physical Exam: additional assessment and treatment as situation permits.
 - 2. If no evidence of immediate danger, continue assessing, treating and communicating with patient.
 - 3. Keep environment as calm/quiet as possible.

Special Considerations

One First Responder or EMT should assume control of situation and establish contact with patient to reduce confusion and minimize stress.

Use a calm, quiet voice, and talk to the patient. Be honest, direct, and non-threatening.

Move slowly, and explain what you are doing. Avoid remarks that could be perceived to be judgmental.

Keep your own emotions in check. Use physical restraints only if necessary for the protection of yourself or your patient.

Pediatric

Follow Initial Treatment Protocol.

EMT-B

No special protocol needed.

BIRTH

Initial Treatment Protocol

I. NORMAL DELIVERY

- A. Follow Initial Protocols For All Patients:
- B. Emergency Medical Care:
 - 1. If delivery is imminent with crowning, commit to delivery on site and radio responding ambulance personnel of situation.
 - 2. If delivering, apply gloves, mask, and gown and eye protection for infection control precautions.
 - 3. Have mother lie with knees drawn up and spread apart.
 - 4. Elevate buttocks with blankets or pillow.
 - 5. Create sterile field around vaginal opening with sterile towels or paper barriers.
 - 6. When the infant's head appears during crowning, place fingers on bony part of skull (not fontanel or face) and exert very gentle pressure to prevent explosive delivery. Use caution to avoid fontanel.
 - 7. If the amniotic sac does not break, or has not broken, use a clamp to puncture the sac and push it away from the infant's head and mouth as they appear.
 - 8. As the infant's head is being born, determine if the umbilical cord is around the infant's neck; slip over the shoulder or clamp, cut and unwrap.

- 9. After the infant's head is born, support the head, suction the mouth two or three times and the nostrils. Use caution to avoid contact with the back of the mouth.
- 10. As the torso and full body are born, support the infant with both hands.
- 11. As the feet are born, grasp the feet.
- 12. Wipe blood and mucus from mouth and nose with sterile gauze, suction mouth and nose again.
- 13. Wrap infant in a warm blanket and place on its side, head slightly lower than trunk.
- 14. Keep infant level with vagina until the cord is cut.
- 15. Assign partner to monitor infant and complete initial care of the newborn.
- 16. Clamp, tie and cut umbilical cord (between the clamps) as pulsation ceases approximately 4 fingers width from infant.
- 17. Observe for delivery of placenta while preparing mother and infant for transport.
- 18. When delivered, wrap placenta in towel and put in plastic bag; transport placenta to hospital with mother.
- 19. Gently massage mother's abdomen until it becomes firm.
- 20. Place sterile pad over vaginal opening, lower mother's legs, help her hold them together.
- 21. Record time of delivery.

II. WHEN BABY IS DELIVERED:

- A. Stimulate the newborn to breathe. Continue to stimulate newborn if not breathing by flicking soles of feet, or rubbing infants back. If the newborn does not begin to breathe or continues to have breathing difficulty after one minute, consider the need for additional measures.
 - 1. Ensure open and patent airway.
 - 2. Ventilate at a rate of 40 breaths per minute.
 - 3. Reassess after 30 seconds.
 - 4. If heart rate is less than 60 beats per minute, a second rescuer should perform chest compressions.
- B. Prevent/minimize heat loss:
 - 1. Warm the external environment (use the engine heater, warm blankets, etc.).
 - 2. Dry the infant thoroughly, removing the wet linen immediately after drying.
 - 3. Wrap the newborn in blankets and cover the head in order to minimize heat loss.
- C. Repeat suctioning if necessary, and continue to monitor and support baby's respiratory/circulatory status.

EMT-B

No special protocol needed.

III. ABNORMAL DELIVERY

PROCEDURE:

A. Breech Delivery:

1. Frank breech (Buttocks Presentation):
 - a. Allow spontaneous delivery.
 - b. Support infant's body as its delivered.
 - c. If head delivers spontaneously, proceed as in Section I (Normal Delivery) A, and B.
 - d. If head DOES NOT deliver within 3 minutes, insert gloved hand into the vagina, keeping your palm TOWARD baby's face; form a "V" with your fingers and push wall of vagina AWAY from baby's face, thereby creating an airway for baby.
 - e. DO NOT REMOVE YOUR HAND UNTIL RELIEVED BY AMBULANCE PERSONNEL OR HOSPITAL STAFF.

B. LIMB PRESENTATION:

- 1) Place mother in head down position.
- 2) Administer high flow oxygen to mother.

C. PROLAPSED CORD:

1. Place mother in head down position, and administer high flow oxygen.

**BIRTH-Initial Treatment Protocol
(continued)**

2. Insert gloved hand into the vagina and gently push up on the baby's head to take pressure off the cord. DO NOT REMOVE YOUR HAND UNTIL RELIEVED BY AMBULANCE PERSONNEL OR HOSPITAL STAFF.

D. MULTIPLE BIRTHS:

1. This is usually not a surprise to the mother, as she has probably already been told to expect same by her doctor, but BE ALERT for the multiple birth possibility. Monitor your patient closely.
2. Deliver as you would for normal delivery of one infant.

E. HEAVY VAGINAL BLEEDING FOLLOWING DELIVERY:

1. Control bleeding - massage lower abdomen firmly.
2. Treat for Shock.
3. Consider putting baby to mother's breast.

F. MISCARRIAGE:

1. May result in profuse vaginal bleeding.
2. Provide emotional support to mother, and treat her immediately for shock
3. Save all expelled tissues, (to include fetus), for transport with patient.

Special Considerations

Consider the possibility of pregnancy in any female of child bearing age with complaints of vaginal bleeding, menstrual cycle irregularity, abdominal cramping and/or pain, low back pain (not associated with trauma), or shoulder pain (not associated with trauma).

The greatest risk to the mother is postpartum hemorrhage so watch closely for signs of hypovolemic shock and excessive vaginal bleeding.

In instances where delivery is not proceeding normally and the mother exhibits sudden onset of severe abdominal pain and the clinical signs of shock, treat for shock.

EMT-B

Consider use of MAST/PASG garment.

**BREATHING DIFFICULTY
(WHEEZING, STRIDOR,
OBSTRUCTED AIRWAY)**

Initial Treatment Protocol

I. ASTHMA ATTACK:

- A. Follow Initial Protocols For All Patients:
- B. Keep the patient at rest.
- C. Place the patient in a sitting position, allowing for proper drainage from the mouth. It often helps if the patient can support himself by the forearms when in a sitting position.
- D. Cover the patient to conserve body heat, but do not allow the patient to overheat.
- E. Provide emotional support.
- F. Continue to monitor the patient and up date the responding ambulance of current patient status and any changes.

EMT-B (Continued)

- 7. Depress inhaler and have patient inhale as deeply as possible, and have them hold their breathe as long as possible to facilitate medication absorption.
- 8. Replace oxygen and allow patient to breath a few times.
- 9. Reassess patient and repeat second dose if necessary per medical direction.

II. CROUP (STRIDOR)

- A. Follow Initial Protocols For All Patients: (Humidified oxygen if possible).
- B. Allow the patient to assume a position of comfort, usually sitting upright on the parent's lap.
- C. Give patient report to responding ambulance.
- D. Should the patient deteriorate into respiratory arrest, be prepared to support respirations according to current CPR guidelines.

EMT-B

- If patient has a physician prescribed, hand-held metered dose inhaler:
- 1. Contact medical direction for approval to give inhaler treatment.
 - 2. Assure medication is prescribed for patient.
 - 3. Is patient alert enough to take treatment?
 - 4. Check expiration date.
 - 5. Shake inhaler vigorously several times.
 - 6. Have patient exhale as deeply as possible, and put lips around inhaler opening.

III. DYSPNEA PATIENT

- A. Follow Initial Protocols For All Patients:
- B. Emergency Medical Care:
 - 1. Administer high flow oxygen.
 - 2. Be prepared to assist respirations.
 - 3. Allow patient to assume semisitting position if conscious.
 - 4. Loosen restrictive clothing.

IV OBSTRUCTED AIRWAY

If unable to ventilate proceed with clearing of obstructed airway observing current cardiopulmonary resuscitation performance standards for obstructed airway according to the American Red Cross or the American Heart Association in all the following cases:

- I. CONSCIOUS ADULT PATIENT.
- II. UNCONSCIOUS ADULT PATIENT (Witnessed):
- III. UNCONSCIOUS ADULT PATIENT (Unwitnessed):

BREATHING DIFFICULTY
(continued)
(WHEEZING, STRIDOR,
OBSTRUCTED AIRWAY)

Special Considerations

You may obtain current BLS/CPR guidelines from:

American Heart Association
Iowa Affiliate
1111 - 9th Street
Des Moines, IA 50314
(515) 244-3278

or

American Red Cross
2116 Grand Avenue
Des Moines, IA 50312
(515) 243-7681

Respiratory emergencies are common calls that require diligent assessment, care, and emotional support.

It is very important to evaluate your patient for adequate breathing throughout the call.

A conscious, dyspneic patient may rapidly deteriorate to respiratory crisis, be prepared to intervene.

COPD patients may react adversely to high flow oxygen administration. Monitor closely and be prepared to assist respirations through artificial ventilation (consider use of BVM) and contact responding ambulance.

Special Considerations (Continued)

Frightening a child in any way (causing a child to cry, fight, or cough) may precipitate fatal airway obstruction.

Consider possible foreign body obstruction.

Be gentle, calm and reassuring to patients and parents.

EMT-B

No special protocol needed.

Pediatric

Follow Initial Treatment Protocol.

If the child resists supplemental oxygen, allow the parent to hold the mask for "blow-by" supplemental oxygen.

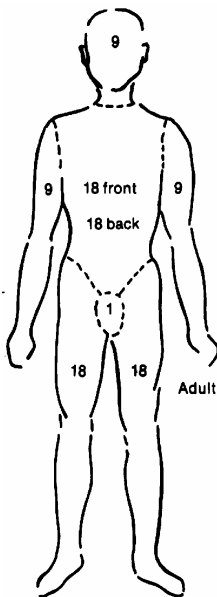
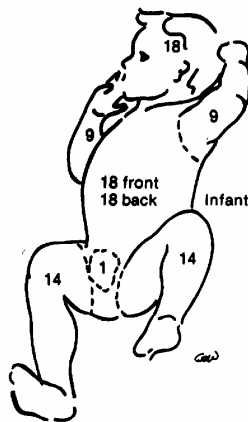
Clear obstructed airway observing current BLS/CPR guidelines.

BURNS

Initial Treatment Protocol

I. THERMAL:

- A. Follow Initial Protocols For All Patients:
- B. Emergency Medical Care:
 1. Stop the burning process, initially with water or saline.
 2. Remove smoldering clothing and jewelry.
 3. Continually monitor the airway for evidence of obstruction.
 4. Administer O₂ as indicated.
 5. Prevent further contamination.
 6. Cover the burned area with a dry sterile dressing or plastic wrap.
 7. Do not use any type of ointment, lotion or antiseptic.
 8. Do not break blisters.



II. CHEMICAL:

- A. Follow Initial Protocols For All Patients:
- B. Emergency Medical Care:
 1. Brush off powders prior to flushing.
 2. Immediately begin to flush with large amounts of water.
 3. Continue flushing the contaminated area.
 4. Do not contaminate uninjured areas while flushing!
 5. Attempt to identify contaminant.

Special Considerations

Burns pose greater risks to infants and children. This is because their body surface area is greater in relation to their total body size. This results in greater fluid and heat loss than would be found in an adult patient.

Consider the possibility of child abuse. **(Iowa Child Abuse Reporting Number is 1-800-362-2178)**

To estimate percent of body surface area injured you can also use the "Rule of Palm". The patient's palm equals approximately 1 percent of the body surface area.

EMT-B

No special protocol needed.

Pediatric

Follow Initial Treatment Protocol.

Initial Treatment Protocol - (continued)

BURNS - (continued)

III. TOXIN IN THE EYE:

- A. Follow Initial Protocols For All Patients:
- B. Emergency Medical Care:
 - 1. Flood eye(s) with lukewarm water and have patient blink frequently during irrigation. Use caution to not contaminate other body areas.
 - 2. Continue irrigation until ambulance personal take over.
 - 3. Attempt to identify contaminant.

Special Considerations

Burns pose greater risks to infants and children. This is because their body surface area is greater in relation to their total body size. This results in greater fluid and heat loss than would be found in an adult patient.

Consider the possibility of child abuse.

EMT-B

No special protocol needed.

Pediatric

Follow Initial Treatment Protocol.

IV. ELECTRICAL BURNS:

- A. Follow Initial Protocols For All Patients:
- B. Emergency Medical Care:
 - 1. Treat soft tissue injuries associated with the burn with dry dressing.
 - 2. Treat for shock if indicated.
- C. Suspect spinal injury.
 - 1. Look for other signs of blunt trauma.

CARDIOPULMONARY RESUSCITATION

Initial Treatment Protocol

IF CPR IS NEEDED IMMEDIATELY INITIATE DEFIBRILLATION PROTOCOL

(Automated external defibrillation, or manual as authorized)

Provide CPR/AED according to current performance guidelines.

If the patient is breathing, maintain open airway and check for a carotid pulse. Administer high flow oxygen and be prepared to assist respirations.

If a public access defibrillator is being used upon your arrival, allow set of stack shocks to be completed before changing to your machine.

Special Considerations

Successful resuscitations have been documented after prolonged periods of cold water submersion.

You may obtain current BLS/CPR guidelines from:

American Heart Association
Iowa Affiliate
1111 - 9th Street
Des Moines, IA 50314
(515) 244-3278

or

American Red Cross
2116 Grand Avenue
Des Moines, IA 50312
(515) 243-7681

EMT-B

No special protocol needed.

Pediatric

Follow Initial Treatment Protocol.

Provide CPR according to current performance guidelines.

**CEREBROVASCULAR
ACCIDENT (CVA), PARALYSIS,
“Brain Attack”**

Initial Treatment Protocol

I. STROKE/CVA:

- A. Follow Initial Protocols For All Patients:
- B. Emergency Medical Care:
 - 1. Calm and reassure the patient, even if not conscious.
 - 2. Monitor and maintain patent airway.
 - 3. Administer oxygen 2L via nasal cannula, maintain O2 saturation >90%.
 - 4. Place patient in semi-sitting position.
 - 5. Protect affected limbs from injury during transport, and take care to maintain body heat during transport.
 - 6. Attempt to obtain a history of time of onset, including the exact time the patient was last seen “normal”
 - 7. Determine presence of
 - facial droop
 - arm drift
 - speech deficit
 and report findings to the responding ambulance as soon as possible.
 - 8. Monitor the blood pressure and contact medical control if hypertensive.

Special Considerations

While stroke patients may not be able to speak, they are usually acutely aware of their surroundings and are anxious. Talk to your patient and keep the patient informed about the treatment being rendered.

Stroke patients also experience increased salivation and may have difficulty with swallowing and gag reflexes; therefore be acutely aware of airway management problems.

Use the **Cincinnati Prehospital Stroke Scale** when evaluating a Stroke patient:
Facial Droop (have patient show teeth or smile).

Normal: Both sides of face move equally.

Abnormal: One side of face does not move as well as the other.

Arm Drift (patient closes their eyes and extends both arms straight out for 10 seconds).

Normal: Both arms move the same, or both arms do not move at all.

Abnormal: One arm either does not move, or one-arm drifts down compared to the other.

Speech (patient repeats “The sky is blue in Cincinnati”).

Normal: patient says correct words with no slurring of words).

Abnormal: patient slurs words, says the wrong words, or is unable to speak.

Pediatric

Follow Initial Treatment Protocol.

EMT-B

No special protocol needed.

**JOHNSON COUNTY EMS ASSOCIATION
CARDIAC PROBLEMS**

Initial Treatment Protocol

I. CHEST PAIN:

- A. Follow Initial Protocols For All Patients:
- B. Emergency Medical Care:
 - 1. If trauma related refer to trauma protocol.
 - 2. Place patient in position of comfort, loosen tight clothing and reassure.
 - 3. Administer high flow oxygen.
 - 4. If patient alert and oriented and expresses no allergy to aspirin (wheezing/aspirin induced asthma, or breathing problems) have patient chew and swallow four 81 mg **ASPIRIN** tablets (baby aspirin) or swallow one 325 mg **ASPIRIN** tablet.

II. CARDIAC ARREST:

- A. Follow Initial Protocols For All Patients:
- B. Emergency Medical Care:
 - 1. Provide CPR/AED according to current performance guidelines.
 - 2. See protocol for Advanced Airway approved by State of Iowa.

Special Considerations

Patients with any of the following chief complaints should be treated as suspected acute myocardial infarction, unless ordered otherwise:

- a. Chest pain or pressure in any patient over age 25.
- b. Syncopal episode in any patient over age 25.
- c. Unexplained respiratory distress.
- d. Atypical cardiac pain (i.e., shoulder, arm, or jaw pain in absence of chest pain, especially in patients having past cardiac history or irregular pulse).
- e. Monitor the blood pressure and contact medical control if hypertensive.

In young adults check for history of illicit drugs such as Cocaine and Methamphetamine use.

EMT-B

- 1. Contact medical direction for orders.
- 2. If the patient has been prescribed nitroglycerin (patients nitro only) and blood pressure is greater than 100 systolic, place patient supine and give one dose.
- 3. Repeat one dose in 3-5 minutes if no relief and authorized by medical direction up to a maximum of three doses.
- 4. Reassess vital signs and chest pain after each dose.
- 5. If blood pressure less than 100 systolic or patient does not have prescribed nitro continue assessment and supportive measures.

Pediatric

Follow Initial Treatment Protocol.

COLD EMERGENCIES

Initial Treatment Protocol

I. EXPOSURE TO COLD:

- A. Follow Initial Protocols For All Patients:
- B. Emergency Medical Care:
 1. Remove the patient from the cold environment - protect from further heat loss.
 2. Remove any wet clothing and cover with blanket.
 3. Administer high flow oxygen via non-rebreather mask (NRB) (warmed and humidified if possible)
 3. Handle the patient gently.
 4. Do not allow the patient to walk or exert himself.
 5. The patient should not be given anything by mouth.
 - a. Do not allow the patient to eat or drink stimulants.
 - b. Coffee, tea, or smoking may worsen the condition.
 6. Do not massage extremities.
 7. Cover the patient with a blanket and keep the patient warm.

3. Remove wet or restrictive clothing
4. Do not rub or massage.
5. Do not re-expose to the cold.
6. Remove jewelry.
7. Cover with dry clothing or dressings.

Special Considerations

Shivering occurs between 86-98 degrees F/ (but not below). This is a fair indicator of the severity of hypothermia in the patient.

Do not allow the patient to eat or drink stimulants.

Unwarmed high flow oxygen may cause hypothermia.

The hypothermic heart may be unresponsive to defibrillation.

After failed initial resuscitative measures, avoid defibrillation until core temp is greater than 86 degrees Fahrenheit.

II. LOCAL COLD INJURIES (FROSTBITE):

- A. Follow Initial Protocols For All Patients:
- B. Emergency Medical Care:
 1. Remove the patient from the environment.
 2. Protect the cold injured extremity from further injury (manual stabilization).

Pediatric

Follow Initial Treatment Protocol.
Cover infant's head to maintain body heat.

Initial Treatment Protocol

EMT-B

II. Splint extremity.

III. If an extremely long or delayed transport is inevitable (Contact medical direction prior to the following:)

- A. Start rapid rewarming (Immerse the affected part in warm water of 100-105 degrees Fahrenheit).
- B. Monitor the water to ensure it does not cool from the frozen part.
- C. Continuously stir water.
- D. Continue until part is soft and color and sensation return.
- E. Dress the area with dry sterile dressings.
- F. Protect against refreezing.

EXTREMITY INJURIES

I. EMERGENCY MEDICAL CARE OF BONE OR JOINT INJURIES:

- A. Follow Initial Protocols For All Patients:
- B. Emergency Medical Care:
 - 1. Assess pulse, motor, and sensation in all extremities.
 - 2. Establish and maintain manual stabilization of injured extremity by supporting above and below the injury.
 - 3. Remove or cut away clothing and jewelry.
 - 4. Cover open wounds with a sterile dressing.
 - 5. Do not intentionally replace any protruding bones.
 - 6. Assist ambulance personnel as indicated and needed.

EMT-B

- 1. Immobilize the joint above and below the injury.
- 2. If there is severe deformity or the distal extremity is cyanotic or lacks pulses, align with gentle traction before splinting.
- 3. Pad each splint to prevent pressure and discomfort to the patient.
- 4. Splint the patient before moving when feasible.
- 5. When in doubt, splint the injury.
- 6. Consider MAST/PASG for splinting.

Pediatric

Follow Initial Treatment Protocol.

Special Considerations

Studies of mechanism of injury indicate that infants and children with fractured femurs often have injury to internal organs.

HEAT EMERGENCIES

Initial Treatment Protocol

I. EXPOSURE TO HEAT

- A. Follow Initial Protocols For All Patients:
- B. Emergency Medical Care:
 1. Remove the patient from the hot environment and place in a cool environment (back of air conditioned response vehicle).
 2. Administer high flow oxygen.
 3. Loosen or remove clothing.
 4. Cool patient by applying water and fanning, and apply cool packs to neck, groin and armpits.
 5. If patient is alert, stable and not nauseated, have them drink small sips of water.
 6. If patient is unresponsive or is vomiting, place in recovery position.

Special Considerations

Not all heat emergencies are environmental in nature. They may have febrile or neurological etiology.

High body temperature may cause seizures.

Rapid cooling may cause vomiting.

EMT-B

No special protocol needed.

Pediatric

Follow Initial Treatment Protocol.

Be prepared to treat febrile seizures in infants.

Consider sponging with **ONLY COOL** water. (DO NOT induce shivering).

POISONING

Initial Treatment Protocol

I. INGESTED POISONS

- A. Follow Initial Protocols For All Patients:
- B. Emergency Medical Care:
 - 1. Identify and estimate amount of substance ingested. Determine time of ingestion and if patient has vomited. Give container to responding ambulance.
 - 2. Identify and estimate amount of substance ingested. Call Poison Control and follow directions.
 - 3. DO NOT induce vomiting unless directed to do so by Medical Direction.

II. INHALED POISONS: (If hazard of inhaled poison is still present, DO NOT ENTER SCENE without self-contained breathing apparatus)!

II. Inhaled poisons (cont.):

- A. Follow Initial Protocols For All Patients:
- B. Emergency Medical Care:
 - 1. Remove patient to fresh air and administer high flow oxygen.
 - 2. Estimate duration of exposure to inhaled poison.
 - 3. Call Poison Control and follow directions.
 - 4. Contact responding ambulance as soon as possible, and advise of information given by poison control and care given.

III. ABSORBED POISONS:

- A. Follow Initial Protocols For All Patients:
- B. Emergency Medical Care:
 - 1. Identify contaminate! If it will be a hazard to you, use protective clothing and extreme caution.
 - 2. Call Poison Control and follow directions given.
 - 3. Contact responding ambulance as soon as possible, and advise of information given by poison control and care given.

III. Absorbed poisons (cont.):

- 4. Call responding ambulance immediately, and advise them of the substance, this will allow them time to contact Poison Control if it is necessary.

IV. INJECTED POISONS:

- A. Follow Initial Protocols For All Patients:
- B. Emergency Medical Care:
 - 1. BE ALERT for respiratory difficulty, maintain airway, and give high flow oxygen.
 - 2. Call Poison Control while checking patient for marks, rashes, or welts.
 - 3. Try to identify source of injected poison.
 - 4. Give information to ambulance.

POISONING - (continued)

POISON CONTROL
PHONE 1-800-222-1222

Pediatric

Call Poison Control!

Because it is usually extremely difficult or impossible to be sure exactly how much the child has taken, always treat for the worst.

It is important to find out an infant or child's weight, which in combination with the estimated amount of the poisonous substance that was ingested will help Poison Control determine appropriate treatment.

SEIZURES

Initial Treatment Protocol

I. CONTINUING SEIZURES:

- A. Follow Initial Protocols For All Patients:
- B. Emergency Medical Care:
 1. Administer high flow oxygen.
 2. Prepare patient for transport, taking special care to protect the patient from injury. Avoid excessive (potentially harmful) restraints.

II. DURING SEIZURE:

- A. Follow Initial Protocols For All Patients:
- B. Emergency Medical Care:
 1. Protect patient from injury, by clearing area of all possible hazards.
 2. Protect patient's privacy by removing bystanders.
 3. Do NOT attempt to put anything into patient's mouth.
 4. Place patient in recovery position.
- C. Monitor duration and document observations.

III. POST SEIZURE:

- A. Follow Initial Protocols For All Patients:
- B. Emergency Medical Care:
 1. Continue airway assessment and administer high flow oxygen.
 2. Treat for any injuries and advise responding ambulance of situation, and continue monitoring vital signs and respirations closely.

Pediatric

Follow Initial Treatment Protocol.

Provide oxygen by pediatric NRM or blow-by-technique.

Special Considerations

Continuing seizures is a true LIFE THREATENING emergency and requires IMMEDIATE transport!

Approximately 5% of children have seizures as a result of fever. Febrile seizures are most common between the ages of 6 months and 4 years.

EMT-B

No special protocol needed.

SEXUAL ASSAULT (Alleged)

Initial Treatment Protocol

- I. Follow Initial Protocols For All Patients:
- II. Emergency Medical Care:
 - A. Identify yourself to the patient, assure patient that they are safe, and are in no further danger.
 - B. Do NOT burden patient with questions about the details of the crime; you are there only to provide emergency medical care.
 - C. BE alert to immediate scene and document what you see! Touch only what you need to touch at the scene.
 - D. Do not disturb any evidence unless necessary for treatment of patient. (If necessary to disturb evidence, DOCUMENT WHY and how it was disturbed).
 - E. Treat for shock if indicated.
 - F. Treat other injuries as indicated.
 - G. Preserve evidence, such as clothing you may have had to remove for treatment, and make sure that it is NEVER left unattended at any time, to preserve "chain of evidence".
 - H. Contact local law enforcement if not present.

Special Considerations

Crewmembers of the same sex may relate better to the patient in time of such emotional crisis. Accurately record your observations and conversations with the patient.

Do NOT allow the patient to bathe, douche, change clothes, or go to the bathroom.

EMT-B

No special protocol needed.

Pediatric

Follow above Initial Treatment Protocol. Gather information from the parents or care giver away from the child without expression of disbelief or judgment

Talk with the child separately about how the injury occurred.

If you are suspicious about the mechanism of injury, transport the child even though the severity of injury may not warrant such action.

Report your suspicions to the emergency department staff in accordance with local policies.

TRAUMA

Initial Treatment Protocol

I. BLEEDING AND SHOCK EMERGENCIES

A. External Bleeding:

1. Follow Initial Protocols For All Patients:
2. Emergency Medical Care:
 - a. Use body substance isolation.
 - b. Maintain airway/ artificial ventilation and give high flow oxygen. Consider use of blindly inserted, combitube if indicated and approved by medical direction.
 - b. Control bleeding by applying pressure directly on the point of bleeding.
 - c. Elevation of a bleeding extremity may be used secondary to and in conjunction with direct pressure if no injury to the muscle or bone exists.
 - d. Large gaping wounds may require sterile gauze and direct hand pressure.
 - e. If bleeding persists, consider appropriate arterial pressure points in upper and lower extremities.
 - f. Treat for Shock if present.
 - g. A tourniquet should be used only as a last resort.

EMT-B

MAST/PASG could also be used as pressure dressings.

B. INTERNAL BLEEDING:

1. Follow Initial Protocols For All Patients:
2. Emergency Medical Care:
 - a. Use body substance isolation (BSI).
 - b. Maintain airway/artificial ventilation.
 - c. Administer high flow oxygen if not already done during the initial assessment.
 - d. Keep the patient calm and in position of comfort. Reassure them while waiting for the ambulance to arrive.
 - e. Keep the patient warm.
 - f. Treat for shock if needed.

C. SHOCK (hypoperfusion)

1. Follow Initial Protocols For All Patients:
2. Emergency Medical Care:
 - a. Body substance isolation (BSI).
 - b. Maintain airway/artificial ventilation.
 - c. Administer high flow oxygen.
 - d. Control any external bleeding.
 - e. Keep the patient calm, and in position of comfort.

- d. Prevent loss of body heat by covering the patient with a blanket when appropriate.
- e. Elevate the lower extremities 8-12 inches if patient has no serious injuries to the pelvis, lower extremities, head, chest, abdomen, neck, or spine.
- f. Do not give food or drink.

EMT-B

If signs of shock are present and the lower abdomen is tender and pelvic injury is suspected, with no evidence of chest injury, apply and inflate the MAST/PASG if approved by medical direction.

II. CHEST INJURIES:

- A. Follow Initial Protocols For All Patients:
- B. Emergency Medical Care:
 1. Seal open chest wounds **IMMEDIATELY** that may be making a sucking sound. Use occlusive dressing taped down on three sides. If the patient's breathing becomes worse, lift one corner of the dressing to release pressure, and then re-seal.

CHEST INJURIES (cont.)

2. Impaled objects must be left in place, and should be stabilized by building up around object with multi-trauma dressings, etc., taking care that the penetrating object is not allowed to do further damage.
3. Impaled objects in the face may be removed if causing airway problems, or you are having trouble controlling bleeding. Use direct pressure on injury after removal to control any bleeding.

EMT-B

1. Check for tracheal deviation, subcutaneous emphysema, and obvious chest deformity if injuries resulted from severe compression of chest from steering wheel, ect. Also suspect spine injury in this patient. Contact medical control for further instructions.
2. Rib fractures or flail segments of chest should be stabilized with a thick pad of dressings, or a small pillow, taped securely in place with wide strips of tape or secured with wide triangular bandages.

TRAUMA - (continued)

Special Considerations

Initial assessment and management of any traumatic incident, minor or major, should be accomplished in a similar manner during each situation following the Initial Treatment Protocol for all patients.

Immediate transport is critical for patient with signs and symptoms of shock (hypoperfusion: pallor, dyspnea, tachycardia, low blood pressure or altered mental status).

It is necessary that all First Responders learn how to use the Glasgow Coma Score, and learn how to use the Iowa Trauma System Out-Of-Hospital Trauma Triage Destination Decision Protocol.

Advise responding ambulance of possible shock before their arrival when possible.

Pediatric

Follow Initial Treatment Protocol.

III. HEAD/NECK AND SPINE

INJURIES:

- A. Follow Initial Protocols For All Patients:
- B. Emergency Medical Care:
 1. Establish and maintain manual spinal immobilization.
 2. Monitor airway closely, taking care to suction secretions, be prepared for vomiting (log roll, using manual stabilization as needed).
 3. Control bleeding, and dress and bandage open wounds.
 4. Administer oxygen by NRB at 15 LPM if indicated.
 5. Repeat vital signs, Glasgow Coma Scale, and pupillary response frequently.

EMT-B

1. Place the head in a neutral in-line position unless the patient complains of pain or the head is not easily moved into position.
2. Apply cervical collar.
3. Maintain constant manual in-line immobilization until the patient is properly secured to a backboard with the head immobilized.

TRIAGE - MASS CASUALTY INCIDENT

A multiple causality incident (MCI) is an event in which the resources available are insufficient to manage the number of casualties or the nature of the emergency. Johnson County First Responders will use the Johnson County Ambulance Service MCI plan. The Johnson County Mutual Aid Associations Incident Management System will be followed. The initial responders on the scene will need to establish Medical Sector Command. As more personnel and JCAS arrives on scene the role may be transferred as per the policy. It is important that only one individual is assuming command, thus it is important to clearly identify this individual. The initial Medical Sector Officer will initiate the responsibilities outlined in the JCAS plan. (See Appendix) Triage will be done following the START plan outlined here.

(S.T.A.R.T.)

Simple Triage and Rapid Transport
The first step in the S.T.A.R.T. plan is to have all victims capable of walking move to a designated area - preferably the treatment area. In a timely manner these "walking wounded" must be I.D.'d and tagged and more thoroughly assessed.

The S.T.A.R.T. triage system is very simplistic and based on three (3) very quick assessments;

I. Respiratory Assessment

A. No respirations

1. ID as priority 4 patient and move to next victim.

B. Respiratory rate of >30 min.

1. ID as a high priority patient (priority 1 or 2) and move to the next victim.

C. Respiratory rate of <30 min.

1. Unable to ID priority at this point - continue with the next step of the survey - perfusion assessment.

II. Perfusion Assessment

A. Capillary Refill

1. >2 seconds - ID as high priority (priority 1 or 2) and move to next victim.

2. <2 seconds - proceed to second portion of perfusion assessment- radial pulse check.

Perfusion Assessment (continued)

B. Radial pulse check

1. None palpable - ID as a high priority (priority 1 or 2) and move to next victim.

2. Present and palpable - continue with survey - central nervous system assessment.

III. Central nervous system (CNS) assessment

A. The patient responds to simple commands (wiggle your fingers, blink your eyes...) ID as low priority (priority 3) and move to next victim.

B. Unable to respond to simple commands (wiggle your fingers, blink your eyes...) ID as a high priority (priority 1) and move to next victim.

Comments:

- * The S.T.A.R.T. assessment should be easily completed in less than one minute.
- * Treatment during triage operations shall be limited to controlling serious bleeding and established airways - correcting life threatening conditions.
- * Colored ribbons or tags shall be used to ID victims.

TRIAGE (continued)

Triage system: When assigned to disaster field area, the provider must triage the victims involved in the incident. The provider will identify victim's condition with visual triage markers (supplied in every ambulance.) The markers will coordinate with the following criteria.

Priority:

1. **Red - Most Urgent**
2. **Yellow -Second Priority**
3. **Green - Third Priority**
4. **Black - Deceased**

Red Category:

1. The injuries are such that life threatening shock and/or hypoxia is present or imminent.
2. The patient can be stabilized without the need for constant or labor intensive care.
3. The patient has a high probability of survival if given immediate care and rapidly transported.

Yellow Category:

1. Patients whose injuries have systemic implications and effects.
2. Patients who are not yet in life threatening shock or hypoxia.
3. Unless countered, systemic decline will ensue.
4. These are patients who appear able to withstand a 45-60 minute wait in the field without immediate risk.

Green Category:

1. Patients with localized injuries that do not commonly have an immediate systemic implication.
2. This patient can wait up to several hours to receive care without danger to life or limb.
3. Patients who would fit this definition after a minimum of care (such as splinting and immobilization of a limb), should also be included.

Black Category:

1. Any patient who has no spontaneous circulation is classified as dead without further resuscitative efforts.
2. No distinction between clinical and biological death can be made.
3. Victims will be covered with a sheet upon triage.

Evacuation of victims to triage area should be in order to triage criteria. Red first, yellow after all red victims have been taken to triage area. Green after all yellow victims have been taken to triage area (if ambulatory direct to green treatment zone.) Black: All black should be left where victim is found and covered appropriately, triage officer will re-evaluate victims and direct rescuers to appropriate treatment areas with victims.

UNCONSCIOUS PATIENT

Initial Treatment Protocol

I. UNCONSCIOUS MEDICAL PATIENT:

- A. Follow Initial Protocols For All Patients:
- B. Emergency Medical Care:
 - 1. Open and maintain airway.
 - 2. Administer high flow oxygen.
 - 3. If problem identified, follow appropriate protocol.
 - 4. Advise responding ambulance of any information gathered during assessment.

II. UNCONSCIOUS TRAUMA PATIENT:

- A. Follow Initial Protocols For All Patients:

Special Considerations

If unconsciousness is due to trauma or unknown cause, assume patient has a spinal cord injury.

Be prepared to handle combative, disoriented patient, or seizures.

EMT-B

Consider glucometer check if available.

Pediatric

Follow Initial Treatment Protocol.

Provide oxygen by pediatric NRM or blow-by-technique.

APPENDIX A COMBITUBE AIRWAY

1) Perform scene size-up.

Use proper body substance isolation. Gloves are needed when there is a potential of contacting blood or body fluids; gowns are needed when large splash situations are likely, e.g., childbirth or major trauma; masks and eye protection are needed in situations when there is potential for blood or body fluid spatter. Assess scene safety, trauma mechanism of injury (MOI) or medical Nature of illness (NOI), and number of patients. In cases of orotracheal intubation gloves, mask, and eye protection are needed.

2) Perform initial assessment.

Assess the general impression of patient, chief complaint, responsiveness, airway, breathing, and circulation status. Apply high flow oxygen, begin treatment for life-threatening injury/illness, if needed, and make transport decision based upon initial assessment.

Indications: The Combitube® is used for adult patients who are unconscious, apneic, and have no gag reflex.

Contra-indications: Never insert the Combitube® in a patient who is conscious with a gag reflex, who is under the age of 16, less than five feet in height, who has swallowed a corrosive substance, or who has known esophageal disease.

3) Gather and prepare necessary equipment.

The necessary equipment for Combitube® insertion includes the Combitube®, 150 cc syringe, 20 cc syringe, water-soluble lubricant, and stethoscope. Inflate and check both the distal cuff (10- 15 cc of air) and the pharyngeal balloon (100 cc of air) for proper functioning. Lubricate the distal end of the tube with water-soluble lubricant.

4) Position for Combitube® tube insertion.

Position the patient's head in a neutral or slightly flexed position if no suspected spinal injury (if a spine injury is suspected, maintain a neutral, in-line head position). Position yourself at the head of the patient (your left should also be the patient's left) with the assembled Combitube® equipment.

5) Insert the Combitube®.

Gently grasp the patient's lower jaw with the thumb and index finger of your non-dominant hand, lifting slightly upward. Holding the Combitube® in your dominant hand blindly insert the Combitube® into the midline of the mouth and pharynx following the normal curvature. Advance tube until the black measurement rings are aligned with the patient's teeth or the alveolar ridges. Never force the device; if it does not advance, simply readjust the insertion.

6) Inflate the pharyngeal balloon.

Using the larger syringe, inject 100 cc of air into the pharyngeal balloon or blue pilot valve. The device may move slightly as the Combitube® seats itself within the posterior pharynx.

7) Inflate the distal cuff.

Using the 20 cc syringe, inject 15 cc of air into the distal cuff (white pilot valve) or until resistance is felt.

COMBITUBE (cont.)

8) Ventilate the patient using the #1 external tube.

The external tube marked #1 will be longer than tube #2. In most cases the Combitube® will be inserted into the esophagus. Always listen for breath sounds in the lung apices and bases, as well as over the epigastrium. If the tube is placed in the esophagus and the patient is ventilated with the blue #1 port, there should be breath sounds in the lungs and no sound over the epigastrium.

9) Ventilate using the #2 external tube.

If there is an absence of lung sounds and positive sounds over the epigastrium when ventilating with #1 port, use the smaller #2 external tube. This will mean the tube is in the trachea. Once switched, again listen for breath sounds in the apices and bases of the lungs and over the epigastrium.

10) Confirming tube placement.

Proper tube placement is confirmed by assuring bilateral lung sounds are present and that sounds are absent upon auscultation of the epigastrium. Placement is to be confirmed upon initial placement and each time patient is moved.

11) Ventilate with 100 percent oxygen and bag-valve.

Once tube placement is confirmed (by listening to bilateral lung sounds and the epigastrium), ventilate the patient with high-flow oxygen at an appropriate rate. Always reassess and allow for exhalation between ventilations.

12) Continually assess tube placement.

Since there is always a possibility for the tube to slip from its position or be incorrectly placed, after every major patient movement the tube's placement should be reevaluated by reassessing lung sounds and over the epigastrium.

13) Continue with further assessments.

Because securing the airway is most important, further assessment may not take place until after securing the airway. It may be necessary to complete the initial, focused, detailed, and on-going assessments after orotracheal intubation.

14) Remove tube, if indicated.

It may be necessary to remove the tube if the patient regains consciousness and begins to breathe on his/her own. In these cases, make sure a large bore suction catheter and suction unit are available. Never remove a tube unless the patient has resumed breathing on his/her own. If no spinal injury, turn the patient onto the left side and deflate all cuffs. In a smooth motion, remove the tube from the oropharynx. Be alert for vomiting and suction the oropharynx.

15) Document assessments and emergency care.

All assessments and emergency medical care need to be documented on the patient care report (PCR) for any trends the patient may present and any improving or worsening conditions. The procedure should be documented on the PCR. The PCR serves as a medical and legal document for the emergency call.

Appendix B APPENDIX C

MAST/PASG APPLICATION

Indications: A qualified EMS provider* may use this skill for the following:

- A. To stabilize lower extremity or pelvic fractures.
- B. To control bleeding of large lower extremity lacerations.

Contraindications: Do not use on patients with pulmonary edema, congestive heart failure or cardiogenic shock.

Procedure/Treatment:

1. Contact medical direction for order to apply MAST/PASG.
2. Use one of the standard application procedures of the MAST/PASG, taking precautions to protect the spine or extremity injuries.
3. Cut the patient's pants off and remove shoes.
4. Wrap legs and abdomen snugly with Velcro straps.
5. Attach the tubing to each of the three compartments and foot pump.
6. Make sure valve stems are in the open position (in line with the tubing).
7. Pump trouser up until one of the following occurs.
 - a. BP rises to above 100 mm systolic.
 - b. Velcro straps slip and/or pop-off valve releases.
 - c. Trousers indent with firm pressure.
8. Turning off the valve to filled compartments can compensate for uneven compartment filling.
9. Note the time of the MAST/PASG inflation.
10. Monitor vital signs, especially the blood pressure, every five minutes until arrival to the ER.
11. **DO NOT DEFLATE MAST!** In the event that respiratory distress develops after inflation, contact medical direction for further orders.
12. Upon arrival to the ER, provide the nurse and/or doctor with the time of inflation and the vital signs before and after inflation.

***Qualified EMS provider:** A certified EMT-B, EMT-I or Paramedic who has demonstrated the skills necessary to competently perform this procedure and has the approval of the medical director.

APPENDIX C

JCAS Multiple Causality Incident Plan

A multiple casualty incident (MCI) is an event in which the resources available are insufficient to manage the number of casualties or the nature of the emergency. Johnson County Ambulance staff will use this plan whenever more than one ambulance is dispatched to a scene or an event. Events or incidents may be broken down or categorized as follows:

- Uni-focal MCI- incident is limited to a single location or scene.
- Multi-focal MCI- incident has several scenes or covers a wide area.
- Minor MCI-
 - Involves 3-6 patients.
 - Requires 2-3 ambulances.
- Major MCI-
 - Involves 6-15 patients.
 - Requires 3 or more ambulances.
- Massive MCI-
 - Involves greater than 15 patients.
 - Requires multiple ambulances and agencies.

Incident Management System

Johnson County Ambulance will follow the Incident Management System(IMS). The purpose is to prevent independent actions and chaos at the scene of an incident in order to provide the most effective and efficient patient care in as safe an environment as possible. One component of the IMS is the Medical Sector. JCAS staff will facilitate the responsibilities of the medical sector. At many scenes, Fire or Law enforcement will assume the role of Incident Command (IC). In these situations the Medical Sector will fall under the direction of Incident Command. There may be situations where JCAS personnel serve as the IC as well as command of the Medical Sector. Thus, this plan should be followed in a flexible manner. It is important to know the roles and responsibilities and then adapt them to the situation. The plan can be expanded or compressed depending on the incident.

Medical Sector

The medical sector includes the medical sector officer, triage, transportation, transport, and staging. Each component doesn't have to have one person assigned. It is important that the functions of each position are executed.

Medical Sector Command- The first en-route or on-scene ambulance crew needs to establish medical sector command. If a Field Supervisor or other member of management is first on scene they will assume command. Otherwise, the role will go to the senior most paramedic or their designee. As more personnel arrive on scene, and as the situation dictates, the role may be transferred. (See "Procedures for transferring command.") It is important that only one individual is assuming command, thus it is important to clearly identify this individual. The person assuming command should communicate this to all on-duty crews using the JCAS 800 radio ops channel. This individual should also wear the orange "Medical" vest located in the disaster bag. Once established, medical command should do the following:

- Advise dispatch of the situation and request additional resources as needed. (See the resource list located in the cab of the ambulance.)
- Advise the on-duty Field Supervisor or acting Field Supervisor of the situation. Management-on-call should be notified.
- Ensure that the appropriate emergency rooms are aware of the situation.
- Once on-scene, perform a scene size up and alert responding units and emergency rooms as to number of patients and mechanism of injury.

- Maintain effective communication with incident command and other responding agencies.
- Identify hazards and ensure the safety of responding personnel.
- If applicable set up a medical command post.
- Assign individuals to other medical sector components or assume the functions of those positions.

Staging Officer-A staging sector may be required in large incidents. In every situation it is important to coordinate the arrival of responding resources to prevent vehicle congestion and response delays. All responding units should report to staging. The role of the staging officer includes the following:

- Coordinate the location for incoming resources, both ground and air.
- Document responding units and personnel.
- Coordinate incoming personnel. Distribute assignments.
- Provide updates to Medical Sector Command as needed.

Triage Officer-The individual doing triage should not be treating patients. Less than one minute should be spent doing an initial assessment to determine the priority of a patient. The role of the triage officer includes the following:

- Directs the triage of all patients using the START method.
- Ensure that triage tags are properly completed and secured to the patient.
- Coordinate movement of patients to the hospital or treatment area with the treatment officer.
- Provide updates to Medical Sector Command as needed.

Treatment Officer-The role of the Treatment Officer includes the following:

- Establish a suitable treatment area.
- Coordinate the treatment of all patients.
- Make requests for additional resources through Medical Sector Command.
- Coordinate patient transport with the Transportation Officer.

Transportation Officer-The role of the Transportation Officer includes the following:

- Ensure the organized transport of patient's off-scene.
- Facilitate the distribution of patients to the appropriate hospitals to prevent overloading.
- Account for all patients and complete a transportation log if needed.
- Contact receiving hospitals to advise of number of patients, condition of patients and estimated arrival.
- Provide updates to Medical Sector Command as needed.

Procedures for transferring command:

Command is transferred to improve the quality of the operation. As additional resources arrive command may be transferred to a more senior paramedic or member of management. It is the responsibility of arriving members of management to assess the situation and assure the current individual assuming command is operating in an effective manner. It may be desirable for that individual to continue in the command role. In that case the arriving member of management will continue in a supportive role. To transfer command:

- The individual assuming command will communicate with the individual being relieved by radio or face to face. It is preferred that transfer takes place face to face.
- The individual being relieved will update the person assuming command with:
 - The general situation status.
 - Deployment and assignment of personnel.
 - The need for additional resources.
- The change of command should be communicated to all on scene resources.

APPENDIX D

EMS OUT-Of-HOSPITAL DO-NOT-RESUSCITATE PROTOCOL

Purpose: This protocol is intended to avoid unwarranted resuscitation by emergency care providers in the out-of-hospital setting for a qualified patient.ⁱ There must be a valid Out-Of-Hospital Do-Not-Resuscitate (OOH DNR) order signed by the qualified patient's attending physician or the presence of the OOH DNR identifier indicating the existence of a valid OOH DNR order.

No resuscitation: Means withholding any medical intervention that utilizes mechanical or artificial means to sustain, restore, or supplant a spontaneous vital function, including but not limited to:

1. Chest compressions,
2. Defibrillation,
3. Esophageal/tracheal/double-lumen airway; endotracheal intubation, or
4. Emergency drugs to alter cardiac or respiratory function or otherwise sustain life.

Patient criteria: The following patients are recognized as qualified patients to receive no resuscitation:

1. The presence of the uniform OOH DNR order or uniform OOH DNR identifier, or
2. The presence of the attending physician to provide direct verbal orders for care of the patient.

The presence of a signed physician order on a form other than the uniform OOH DNR order form approved by the department may be honored if approved by the service program EMS medical director. However, the immunities provided by law apply only in the presence of the uniform OOH DNR order or uniform OOH DNR identifier. When the uniform OOH DNR order or uniform OOH DNR identifier is not present contact must be made with on-line medical control and on-line medical control must concur that no resuscitation is appropriate.

Revocation: An OOH DNR order is deemed revoked at any time that a patient, or an individual authorized to act on the patient's behalf as listed on the OOH DNR order, is able to communicate in any manner the intent that the order be revoked. The personal wishes of family members or other individuals who are not authorized in the order to act on the patient's behalf shall not supersede a valid OOH DNR order.

Comfort Care (♥): When a patient has met the criteria for no resuscitation under the foregoing information, the emergency care provider should continue to provide that care which is intended to make the patient comfortable (a.k.a. ♥ Comfort Care). Whether other types of care are indicated will depend upon individual circumstances for which medical control may be contacted by or through the responding ambulance service personnel.

♥ **Comfort Care** may include, but is not limited to:

1. Pain medication.
2. Fluid therapy.
3. Respiratory assistance (oxygen and suctioning).

ⁱ *Qualified Patient* means an adult patient determined by an attending physician to be in a terminal condition for which the attending physician has issued an Out of Hospital DNR order in accordance with the law. Iowa Administrative Code 641-142.1 (144A) Definitions.

APPENDIX E

PHYSICIAN ON SCENE

Your offer of assistance is appreciated. However, this EMS service, under law and in accordance with nationally recognized standards of care in Emergency Medicine, operates under the direct authority of a Physician Medical Director. Our Medical Director and his or her physician designees have already established a physician-patient relationship with this patient. To ensure the best possible patient care, and to prevent on your part inadvertent patient abandonment or interference with an established physician-patient relationship, please comply with our established protocols.

Please review the following if you wish to assume responsibility for this patient:

1. You must be recognized or identify yourself as a qualified physician.
2. You must be able to provide proof of licensure and identify your specialty.
3. If requested, you must speak directly with the on-line medical control physician to verify transfer of responsibility for the patient from that physician to you.
4. EMS personnel, in accordance with State law, can only follow orders that are consistent with the approved protocols.
5. You must accompany this patient to the hospital, unless the on-line medical control physician agrees to re-assume responsibility for this patient prior to transport.

APPENDIX F

DISCONTINUATION OF RESUSCITATION

INDICATIONS TO CONSIDER TERMINATION OF RESUSCITATION:

- 1) Patient is in full arrest with no signs of life present.
- 2) Patient is considered an adult.
- 3) Full ACLS has been instituted (Paramedic level) to include rhythm analysis and defibrillation if indicated, advanced airway management, and drugs given per protocol.
- 4) No return of circulation or shockable rhythm exists.
- 5) Correctable causes or special resuscitation circumstances have been considered and addressed.

TERMINATION OF RESUSCITATION:

- 1) Patient meets all five criteria under 'indications' above, or patient is terminally ill/DNR where CPR was started prior to knowledge of resuscitation status.
- 2) *Physician on-line medical direction* is contacted (while ACLS continues) to discuss any further appropriate actions.
3. ACLS may be discontinued if *physician on-line medical direction* authorizes.

OTHER CONSIDERATIONS:

- 1) Documentation must reflect that the decision to terminate resuscitation was determined by *physician on-line medical direction*.
- 2) An EMS/health care provider must attend the deceased until the appropriate authorities arrive.
- 3) All IVs, tubes, etc. should be left in place until the medical examiner authorizes their removal.
- 4) Implement survivor support plans related to coroner notification, funeral home transfer, leaving the body at the scene, and death notification/grief counseling for survivors.

Physician on-line medical direction includes either of the following:

- 1) Hospital based physician contact via phone or radio.
- 2) Patient's primary care physician or on call physician contact via phone or radio.

Special Considerations

Patients with profound hypothermia or drug or toxin overdose may benefit from continued resuscitation.

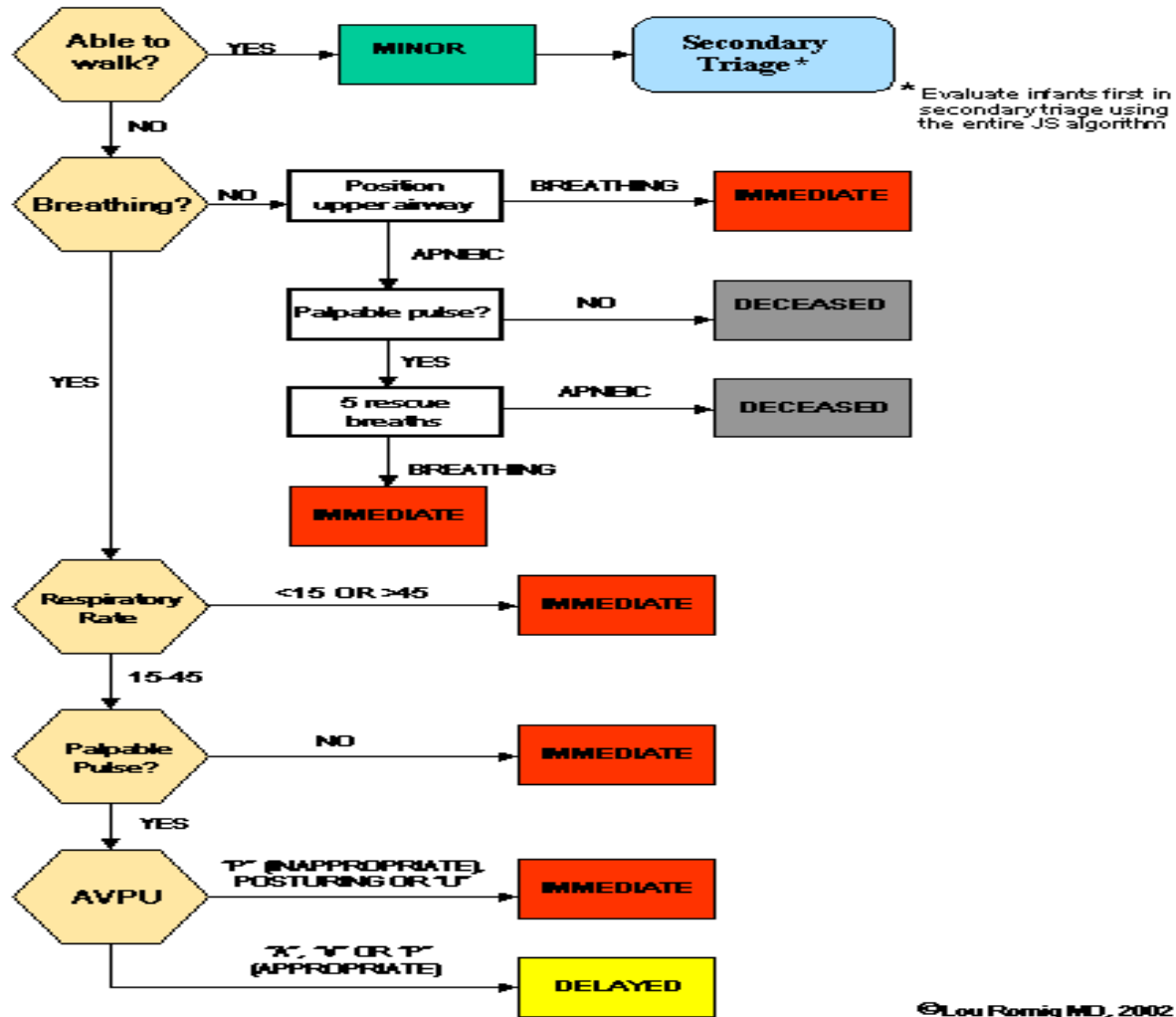
APPENDIX G

Guidelines for EMS Provider Initiating Organ Donation At the Scene of the Deceased

- I. All appropriate patient care protocols will be enacted to assure patient care is provided according to prevailing standards.
- II. If resuscitation efforts are unsuccessful, or if upon arrival the patient is deceased and without indications to initiate resuscitation, then on-line medical direction will be contacted to confirm that no further medical care is to be given.
- III. *As per Iowa Code 142C.7 a medical examiner or a medical examiner's designee, peace officer, fire fighter, or emergency medical care provider may release an individual's information to an organ procurement organization, donor registry, or bank or storage organization to determine if the individual is a donor.*
- IV. *As per Iowa Code 142C.7 Any information regarding a patient, including the patient's identity, however, constitutes confidential medical information and under any other circumstances is prohibited from disclosure without the written consent of the patient or the patient's legal representative.*
- V. At least one EMS provider should remain at the scene until the appropriate authority (medical examiner, funeral home, public safety, etc.) is present.

APPENDIX H

JumpSTART Pediatric MCI Triage [®]



APPENDIX I

Guidelines for EMS Providers responding to a patient with special needs (This Protocol is not intended for interfacility transfers.)

These guidelines should be used when an EMS provider, responding to a call, is confronted with a patient using specialized medical equipment that the EMS provider has not been trained to use, and the operation of that equipment is outside of the EMS provider's scope of practice. The EMS provider may treat and transport the patient, as long as the EMS provider doesn't monitor or operate the equipment in any way while providing care.

When providing care to patients with special needs, EMS personnel should provide the level of care necessary, within their level of training and certification. When possible, the EMS provider should consider utilizing a family member or caregiver who has been using this equipment to help with monitoring and operating the special medical equipment if necessary during transport.

Some examples of special medical devices:

- PCA (patient controlled analgesic)
- Chest Tube

APPENDIX J

KING LTS-D AIRWAY

1. Indications

A. A need to secure an airway and provide ventilations for patients who are unconscious, have no gag reflex and are over 4 feet tall

2. Procedure

A. Choose the correct size airway, based on patient height.

1. Size 3(yellow) 4-5 feet tall.
2. Size 4(red) 5-6 feet tall.
3. Size 5(purple) over 6 feet tall

B. Test the cuff inflation system by injecting the maximum recommended volume of air into the cuffs. Remove all air from both cuffs prior to insertion.

1. Size 3- 60ml.
2. Size 4- 80ml.
3. Size 5- 90ml.

C. Apply a water-based lubricant to the beveled distal tip and posterior aspect of the tube taking care to avoid introduction of lubricant in or near the ventilatory openings.

D. Have a spare King LTS-D ready and prepared for immediate use.

E. Pre-oxygenate.

F. Ensure gag reflex is not intact.

G. Position the head. The ideal position is the “sniffing position”.

H. Hold the airway at the connector with the dominant hand. With non-dominant hand, hold mouth open and apply chin lift.

I. Place the flat edge of the airways tip against the hard palate. The tube should be in the corner of the mouth with the tube rotated laterally(outward), when the tip passes under the tongue, rotate it medially to midline. Continue until the proximal cuff is slightly visible in the posterior pharynx under the base of the tongue. (Never use force when positioning the airway).

J. Depth markings are provided at the proximal end of the airway which refers to the distance from the distal ventilatory opening. When properly placed, with the distal tip and cuff in the esophagus, and the ventilatory openings aligned with the opening to the larynx, the depth markings give an indication of the distance, in centimeters, from the vocal cords to the teeth.

-
- K. Inflate the cuffs to 50-70 ml. using a standard luer-tipped syringe. Use minimum amount of pressure necessary to seal the airway at the peak ventilatory pressure employed.(See maximum amounts above.)
 - L. Check lung ventilation by auscultation and chest movement.
 - M. If ventilation is not sufficient, gently advance or retract the airway to achieve optimal ventilation.
 - N. Secure the airway using the Thomas ET holder.

3. Removal

- A. Removal should always be carried out with suction equipment and intubation equipment readily available for use.
- B. It is important that both cuffs are completely deflated before removal.

4. Contraindications

- A. Responsive patients with an intact gag reflex.
- B. Patients with know esophageal disease.
- C. Patients who have ingested caustic substances.
- D. Patients under 4 feet tall.

5. Considerations

- A. The King LT does not protect the airway from the effects of regurgitation and aspiration.
- B. Intubation of the trachea can not be ruled out as a potential complication.
- C. Lubricate only the posterior surface of the airway.