

## HEALTH SERVICES QUALITY ASSURANCE IMPLEMENTATION GUIDE

### EXERCISE TWELVE

SUBJECT: PROTOCOL FOR MANAGEMENT OF MEDICAL AND TRAUMA  
EMERGENCIES IN THE CLINIC

Ref: (a) COMDTINST 6440.1, Emergency Medical Care Training and Qualification Requirements

**PURPOSE:** This Implementation Guide Exercise will assist clinics in developing and implementing treatment protocols, and in selecting equipment and supplies for the proper management of medical and trauma emergencies in the clinic.

**BACKGROUND:** Although medical and trauma emergencies are uncommon, Coast Guard clinics are required to provide initial pre-hospital care to these patients. The extent of this care will vary according to constraints such as personnel capabilities, equipment, and proximity to hospitals and emergency medical services (EMS). Pre-hospital care consists of two general levels of patient care. Basic life support (BLS) refers to functions commonly performed by the Emergency Medical Technician (Basic), which includes first aid, COR, and other non-invasive treatments. Advanced life support (ALS) is defined as the use of cardiac monitoring, drug administration, defibrillation, intravenous fluids, and endotracheal intubation. Reference (a) limits the routing practice of ALS skills within the Coast Guard to medical officers and paramedics. The only ALS procedure authorized for routine use by Health Services Technicians (HSs) is the initiation of intravenous fluids. For SAR or MEDEVAX incidents, reference (a) authorized the supervising physician to designate additional ALS privileges for HSs in writing, thereby assuming responsibility for these additional treatments.

**DISCUSSION:** Effective emergency preparedness involves coordination with local AMS agencies and area hospital emergency departments (Eds) to determine the extent of treatment, which should be conducted prior to patient entry into the local EMS system or ED. Clinics must fully understand their disaster response role in the community. This will determine the quantity and type of equipment and supplies they must maintain. Historically, some clinics have overstocked emergency medical supplies for the purpose of community disaster preparedness even though local protocols did not call for Coast Guard involvement. Reference (a) requires clinics to maintain ALS equipment (i.e., drug kits, advanced airway management kits, monitor-defibrillator, etc.) in a “ready to go” status. This equipment should be stored in the clinic rather than in emergency vehicles, to eliminate the need for costly excess equipment.

Emergency preparedness consists of three components:

1. Equipment and Supplies
2. Protocols
3. Training

#### Equipment and Supplies

Enclosures (1) through (3) provide examples of equipment and supplies, which will meet the needs of most Coast Guard Clinics. Reference (a) outlines the qualifications required for personnel using this equipment. Equipment must be checked regularly for expiration dates and tampering. It is highly recommended that kits be sealed with plastic or metal “break away” seals in order to minimize the need to inventory all of the contents. Kits containing expiration-dated items, such as drugs, must be dated on the exterior with the date of the shortest dated item as the kit’s expiration date.

## Protocols

Enclosure (4) and (5) provide examples of medical and trauma emergency protocols, which should be part of the written standard operating procedures at all Coast Guard clinics. These protocols should be brief, basic in nature, and committed to memory by staff members. Protocols should be reviewed at least annually, and revised as required.

## Training

Reference (a) provides information on training and certification requirements for Health Service personnel, including cardiopulmonary resuscitation (CPR) and required annual in-service training topics. The orientation for all new clinic personnel must include familiarization with clinic emergency protocols. Periodic drills should be conducted to ensure ongoing staff familiarity with the protocols.

**ACTION:** Coast Guard clinics will have written protocols for the management of medical and trauma emergencies. Clinics will maintain the equipment and supplies necessary to provide pre-hospital care. Clinics will provide orientation for all new personnel, annual in-service training, and periodic drills, addressing protocols for the management of emergencies. Enclosure (1) through (5) may be used in whole or part for this purpose.

- Encl: (1) Suggested Major Emergency Medical Equipment  
(2) Sample Emergency Airway Management Kit  
(3) Sample Emergency Drug Kit  
(4) Sample Protocol: Management of Medical Emergencies  
(5) Sample Protocol: Management of Trauma Emergencies

## **SUGGESTED MAJOR EMERGENCY MEDICAL EQUIPMENT**

BLS equipment is authorized for all Coast Guard Emergency Medical Technicians and health Service Technicians. The use of ALS equipment, is limited to medical officers and licensed paramedics (National Registry or local jurisdiction). Enclosures (2) and (3) will further clarify which equipment is considered to be for BLS or ALS providers.

**BASIC LIFE SUPPORT EQUIPMENT:** (Medical Officers, Paramedics, HSs and EMTs)

1. Backboard, Long
2. Extrication Device (i.e. Kedrick and/or half backboard)
3. Obstetrical Emergency Kit (commercially acquired/sealed)
4. Oxygen Resuscitator, Portable
5. Suction, Portable
6. Pneumatic Antishock Garment (PASG)
7. Traction Splinting Device (i.e. Hare, Reel, etc.)

**ADVANCED LIFE SUPPORT EQUIPMENT:** (Medical Officers, Paramedics, and HSs specifically authorized for SAR and MEDEVAC incidents)

1. Airway Management Kit (See Enclosure #2)
2. Drug Kit (See Enclosure #3)
3. Monitor-Defibrillator, Portable (with battery service unit)

## **EMERGENCY AIRWAY MANAGEMENT KIT**

Kits designed to support basic and/or advanced airway procedures, must contain at a minimum, the items listed below. The bag or box containing these items must provide good content visibility and ready access to all items. Kits not sealed with a “breakaway seal” (highly recommended) must be inventoried daily.

**BASIC LIFE SUPPORT EQUIPMENT:** (Medical Officers, Paramedics, HSs, and EMTs)

1. Bag Masks, Pediatric and Adult
2. Esophageal Obturator Airway (EOA) Items:
  - A. EOA Tube
  - B. EOA Facepiece
  - C. 35 ml Syringe
  - D. Surgical Lubricant
3. Face Masks, Pediatric and Adult (for Positive Pressure Resuscitator)
4. Nasopharyngeal Airways (minimum of 3 sizes)
5. Oropharyngeal Airways (minimum of 4 sizes)
6. Suction Catheters (minimum of 2)
7. Suction Catheter, Rigid (Yankauer type)

**ADVANCED LIFE SUPPORT EQUIPMENT:** (Medical Officers, Paramedics, and HSs specifically authorized for SAR and MEDEVAC incidents)

1. Endotracheal Intubation Items:
  - A. Endotracheal Tubes (sizes 1.0 thru 8.5)
  - B. Forceps, McGill
  - C. Laryngoscope Handle
  - D. Laryngoscope Handle Batteries (spare)
  - E. Laryngoscope Blades, Curved or Straight (minimum of four sizes)
  - F. Laryngoscope Blade Light Bulbs (spare)
  - G. Stylets (two sizes)
  - H. Syringe, 10 ml
  - I. Surgical Lubricant
  - J. Tape

**ENCLOSURE (2)**

## EMERGENCY DRUG KIT

Kits designed to support advanced life support procedures must contain, at a minimum, the items listed below. The box containing these items must provide good content visibility, ready access to all items, be durable, and protect the contents. Kits not sealed with a "break away" seal, must be inventoried daily. For medications, use easy-administration dosage forms, such as prefilled syringes, whenever possible.

### 1. Intravenous (IV) Fluids/Supplies: (Medical Officers, Paramedics and CG health Service Technicians)

- A. Alcohol Prep Pads #10
- B. Arm Boards, Short and Long
- C. Band-Aids #10
- D. Bio-Occlusive IV Site Coverings (i.e. Tegaderm) #10
- E. Butterfly Catheters (minimally #2-23g)
- F. IV Administration Sets: Adult (10-15 drops/ml) #2
- G. IV Catheters (minimally 2 each, sizes 14g thru 22g)
- H. IV Fluids: Dextrose 5% in Water 250 ml #2
- I. Kling, 3 inch #3
- J. Pads, 4x4 #10
- K. Razors, Surgical Prep #2
- L. Tape, one inch
- M. Three-Way Stopcock #2
- N. Tourniquets, Rubber #3 (Penrose Drains)

### 2. Medications: (Medical Officers, Paramedics, and Hss specifically authorized for SAR and MEDEVAC incidents)

- A. Aminophylline 250 mg/10 ml #2
- B. Ammonia Inhalants #10
- C. Atropine Inj. 1 mg/10 ml #2
- D. Bicarbonate, Sodium, 50 meq/50 ml #2
- E. Dextrose 50%, 50 ml #2
- F. Diazepam Inj. 10 mg/2 ml
- G. Diphenhydramine Inj. 50 mg/5 ml #2
- H. Epinephrine 1:1000, 1 ml #3
- I. Epinephrine 1:10,000, 10 ml #4
- J. Furosemide 40 mg/4 ml #2
- K. Glucose, Oral
- L. Lidocaine 100 mg/5 ml #4
- M. Morphine 10 mg/ml, 1 ml #3
- N. Naloxone 0.4 mg/ml #6
- O. Nitroglycerine (SL) 0.4 mg #25

### 3. Miscellaneous: (ALS or BLS Providers)

- A. Dextrostix or Chemstrips #25 (ALS)
- B. Gloves, Surgical #4 (BLS)
- C. Needles (assorted 18 g thru 25 g) (ALS)
- D. Penlight (BLS)
- E. Scissors (BLS)
- F. Syringes (assorted 1 ml thru 20 ml) #2 each (BLS)
- G. Syringe, 35 or 50 ml (BLS)

**ENCLOSURE (3)**

**PROTOCOL FOR**  
**THE MANAGEMENT OF MEDICAL EMERGENCIES**

Medical Emergency: An adverse patient condition not caused by injury (e.g., infection, asthma, allergic reactions, psychiatric conditions, etc.) that requires immediate intervention to alleviate severe suffering or further damage to an organ system.

**FOR ALL PATIENTS MEETING THE ABOVE CRITERIA, DO THE FOLLOWING:**

1. Conduct a Primary Survey (Airway, Breathing, Circulation). Treat any life-threatening conditions (i.e. airway obstruction, apnea, profuse bleeding) immediately.
2. Notify medical officer. The most qualified staff member will remain with the patient at all times and render emergency care to the extent of his/her capabilities. If a medical officer is not available, continue on with #3 below.
3. If transport to another medical facility is required, notify the EMS system and Security. Ensure that arriving EMS personnel are directed to the location of the incident.
4. If time allows, while awaiting transportation, conduct a full patient assessment including: chief complaint, vital signs (including EKG if appropriate), lung sounds, medical history, allergies, and medications. Document this information with a copy for the transporting unit.
5. Initiate Oxygen therapy as appropriate:

Nasal Cannula: 4-6 liters/min (for mild-moderate respiratory distress)

Face Mask (Simple or Non-Rebreather): 12-15 liters/min  
(for moderate-severe respiratory distress)

6. Start an intravenous line of Dextrose 5% in Water if appropriate; however, this procedure should not delay the initiation of patient transport.
7. Administer medications as directed by a physician or in accordance with existing directives (see paragraph 4-d.(2) of reference (a)).
8. Provide a complete verbal and written (if time allows) report to the EMS personnel assuming responsibility for patient care.
9. Document the incident in writing (after the patient's departure) and route to the Chief, Health Services Division.

**ENCLOSURE (4)**

**PROTOCOL FOR**  
**THE MANAGEMENT OF TRAUMA EMERGENCIES**

Trauma Emergency: An adverse patient condition caused by damage to some part of the body, which requires immediate intervention to alleviate suffering or further damage to an organ system.

**FOR ALL PATIENTS PRESENTING WITH THE ABOVE CRITERIA, DO THE FOLLOWING:**

1. Conduct a Primary Survey (Airway, Breathing, Circulation). Treat any life-threatening conditions (i.e. airway obstruction, apnea, profuse bleeding) immediately.
2. Initiate Cervical-Spine immobilization on all patients where the mechanism of injury requires it.
3. Initiate oxygen therapy as appropriate:
  - Nasal Cannula: 4-6 liters/min (for mild respiratory distress)
  - Face Mask: 12-15 liters/min (for all moderate-sever respiratory distress)
4. Notify the medical officer. The most qualified staff member will remain with the patient at all times and render emergency care to the extent of his/her capabilities. If a medical officer is not available, continue on with #5 below.
5. If transport to another medical facility is required, notify the EMS system and Security. Ensure that arriving EMS personnel are directed to the location of the incident.
6. Complete Cervical-Spine immobilization, including extrication device (if required), backboard, blanket roll, and straps. Parts of the body, which will be non-accessible after immobilization, should be examined during this process. If necessary, pneumatic Anti-Shock Garment (PASG) should be applied during C-Spine immobilization.
7. If indicated (BP<80 diastolic or BP<100 systolic with shock symptoms), inflate PASG to attain a blood pressure greater than 100 systolic.
8. Initiate intravenous (IV) fluid replacement if appropriate, with large-bore catheter (14-18g), adult-drip administration set, and Lactated Ringers 1000 ml to run at wide-open rate until Blood Pressure reaches 100 mm Systolic. IV initiation will be done while awaiting transportation and must not delay the start of patient transport.
9. If time allows while awaiting transportation, conduct a full patient secondary survey including: description of the incident, head-to-toe examination, vital signs, EKG (if appropriate), lung sounds, medical history, allergies, and medications. This information should be documented with a copy for the transporting unit. These procedures must not delay the start of patient transport.
10. Administer medications as directed by a physician or in accordance with existing directives (see paragraph 4-d.(2) of reference (a)).
11. Provide a complete verbal and written (if time allows) report to the EMS personnel assuming responsibility for patient care.
12. After the patient's departure, document the incident in writing and route to the Chief, Health Services Division.

**ENCLOSURE (5)**

LETTER SENT TO THE FOLLOWING:

1. SUPPORT CENTER NEW YORK
2. SUPPORT CENTER ELIZABETH CITY
3. SUPPORT CENTER PORTSMOUTH
4. SUPPORT CENTER BOSTON
5. SUPPORT CENTER NEW ORLEANS
6. BASE MIAMI BEACH
7. AIR STATION CAPE COD
8. AIR STATION MIAMI
9. AIR STATION CLEARWATER
10. AIR STATION TRAVERSE CITY
11. AIR STATION BORINQUEN
12. RTC YORKTOWN
13. COAST GUARD YARD
14. TRAINING CENTER CAPE MAY
15. ACADEMY
16. ATC MOBILE
17. COMMANDANT (G-CAS-6) (HQ CLINIC)
18. BASE GALVESTON
19. BASE FT. MACON