

# First Aid Refresher

## LOS ANGELES COUNTY SHERIFF'S DEPARTMENT

### ADVANCED OFFICER TRAINING UNIT

#### First Aid/CPR/AED Refresher POST ID #21797

#### *Expanded Course Outline*

#### **I. Introduction**

- a. Instructors
- b. Students-

1. Last class attended, Last class taught. First Aid, CPR and AED experiences

#### **I. Law Enforcement and Emergency Medical Services**

##### **a. Duty of the Officer / Legal issues**

1. Recognize Responsibility
2. Act in good Faith
3. Provide Emergency Medical Services to best of abilities
4. Stay within scope of their training

##### **b. Emergency Medical Services (EMS) System**

1. Coordinated between
  1. Public Safety (Fire Fighter, Life Guard, Police Officer)
  2. Public Health (Support agencies such as Local EMS)
  3. Health Care Providers (Hospitals)
2. Components of EMS
  1. Dispatcher
    - a. Part of 911 system
      - i. Could be from a variety of EMS or public safety agencies
    - b. Coordinates type and level of EMS
    - c. Emergency medical dispatcher (EMD)
      - i. May give instructions to the public
  2. First Responder
    - a. First medically trained person on scene
  3. Emergency medical Technician
    - a. Provides basic Life Support

4. Paramedic
  - a. Provides Advanced Life support
5. Receiving facility
  - a. Hospital that provides continued medical care

a. **Scene Size Up**

1. Location
2. Type Of Emergency
3. Nature of Ill or Injured Person(s)
4. Need for additional resources
5. Urgent actions (Scene preservation / control)

b. **Assessment and care of victim**

1. Provide basic emergency care
2. Relieved by personnel of equal or higher level of training

c. **Minimum equipment / first aid kit considerations**

1. Bleeding control
2. PPE/BSI
  1. Precautions for glove removal
3. Storage and up keep
4. Individual First Aid Kit (IFAK)
5. Trauma shooting kits (Department specific)

d. **Officer welfare and safety**

1. Pathogens
  1. Bacteria
  2. Virus
2. Transfer of Pathogens
  1. Airborne
  2. Blood Borne
3. Personal Protective Equipment (PPE)
  1. Gloves
  2. Eye Protection
  3. Masks
  4. Gowns
  5. Ventilation Devices
  6. Disposal

7. Document exposure
4. Protective Glove learning activity
  1. Class participation
  2. Demo the whole – Part –Whole teaching theory
  3. Material selection (fake blood, fake vomit, shaving cream)
  4. Teaching Points

**e. Legal Protections**

1. Responsibility to
  1. Assess emergency situations
  2. Initiate appropriate EMS services within scope of officers training
    - a. Includes agency policy
2. Immunity from liability
  1. California Legislature
    - a. Emergency Rescue Personnel immune from liability from civil damages while providing EMS under certain specified conditions
      - i. Health and safety code section 1799.102
  2. Must
    - a. Act within scope of their employment
    - b. Act in good faith
    - c. Stay within training and agency policy
  3. Include but not limited to
    - a. First aid and EMS
    - b. Rescue procedures
    - c. Transportation
  4. Negligence
    - a. Performing beyond scope of their training
    - b. Grossly negligent manner
    - c. Failure to provide care
    - d. Department Policy

**f. Types of consent**

1. Expressed Consent
  - a. Obtained from the ill or injured person
    - i. Conscious and orientated
    - ii. Mentally competent
    - iii. 18 years or older or emancipated Minor
2. Implied Consent
  - a. Assumes that an unconscious or confused victim would consent to receiving help if that person were able to do so.

- i. Unconscious
    - ii. Developmental, emotional or mental disability
    - iii. Altered mental state
      - 1. Drugs, head injury, etc.
    - iv. Juvenile and parent or guardian are not present
- 3. Refusal of care
  - a. Conscious and competent
  - b. Must be honored
- 4. Life Threatening conditions
  - a. If left untreated the condition will degenerate into life threatening condition
  - b. EMS may provide services regardless of victims conscious condition
- 5. Advanced Directives
  - a. DNR (Do Not Resuscitate)
  - b. POLST (Physician order for life sustaining treatment)
  - c. Officer must comply with state local policies
- 6. Duty to continue
  - a. Officer must remain with the victim until
    - i. Officer is physically unable to continue
    - ii. Officer is relieved by equal or greater training
    - iii. Scene becomes unsafe

**g. Victim Assessment**

- 1. Victim assessment
  - 1. Primary assessment
    - a. Rapid and systematic checks
      - i. Responsiveness
      - ii. Airway
      - iii. Breathing
      - iv. Circulation
        - 1. Pulse
        - 2. Capillary
      - v. Control major bleeding
      - vi. Treat for shock
      - vii. Manual spinal stabilization based on mechanism of Injury
  - 2. Secondary Assessment
    - a. Systematic head to toe assessment
    - b. Check and document
      - i. Skin Color
      - ii. Temperature

- iii. Respiratory Rate
  - iv. Pulse rate
  - c. Head to toe Check to identify other injuries
  - d. Gather initial information regarding victim including patient history
3. Pass on to EMS personnel
  4. Possible need to place victim in recovery position

**h. Victim assessment practical application**

1. Student involvement
  1. Places to find a pulse
  2. Capillary Refill
2. Use of full size manikins
  1. Head to toe procedure
  2. Log Roll
3. Multiple Victim Assessment
  1. Standardized Triage System
  2. Classification of categories
  3. Assessment criteria
4. Demo Triage learning activity
  1. Group participation
    - a. Categorize described presented patients
    - b. Group discussion
    - c. "Triage" Case study
    - d. Use of actual triage tags vs colored cards for training

**a. Moving a victim**

1. Do not move patient unless absolutely necessary for scene, patient or officer safety
2. Spinal injury possibilities
3. Plan ahead
4. Reassure victim
5. Victim stability
6. Types of drags and carries
  - a. Shoulder Drag
  - b. Lifts and carries
    - i. Fireman's carry
    - ii. Two man carry
    - iii. Fore and Aft
    - iv. Side by side

- v. Shoulder or belt
- c. Soft litters
- 7. Recovery position
  - a. Multiple victims
  - b. Allows airway a form of protection
- 2. Class demo and practical application of drags and carries
  - 1. Student use
  - 2. Full size manikin use
  - 3. Pros and Cons
  - 4. Preventing injuries
  - 5. How they may relate to Tactical First Aid

**j. Basic Life Support**

- 1. CPR based on current American Heart Association (AHA) BLS for Health Care workers
- 2. Chain of survival
  - 1. Recognize cardiac emergency
  - 2. Activation of EMS
  - 3. Early use of CPR
  - 4. Rapid Defibrillation
  - 5. Effective Advanced Life support
  - 6. Post Cardiac arrest care
- 3. No reassessment
  - 1. Continue until advanced medical aid arrives and relieves you
  - 2. Until true signs of life
    - a. Watch for agonal gasps and spasms
- 4. "recoil" of the heart during compressions
  - 1. Allow full fill of heart chambers for maximum efficiency
- 5. Airway protective barriers
  - 1. Mouth to mouth
  - 2. Mouth to mask (one way valve)
  - 3. Bag valve mask
    - a. Recommended for two or more rescuers
    - b. Two hand technique
    - c. Slow squeeze vs speed and volume
- 6. One rescuer and two rescuer CPR
  - 1. One person
    - a. 30-2
  - 2. Two rescuer

- a. Airway is held open during compressions
  - b. Infant and Child Changes
    - i. 15-2
    - ii. Increases respiratory input to match higher respiratory rates
  - c. Second rescuer should always begin on chest compressions
    - i. Stronger and most effective
- 3. Adult
  - 4. Child
  - 5. Infant
  - 6. Differences in Child and Infant
    - a. Witness vs unwitnessed
    - b. Two rescuer considerations
    - c. Infant check for response and Pulse check at the brachial artery
- 1. Airway obstructions
    - 1. Adult
      - a. Conscious
      - b. Unconscious
    - 2. Child
      - a. Considerations in size
    - 3. Infant
      - a. 5 back slaps to 5 chest compressions
      - b. Gravity to rescuer advantage
  - 2. CPR practical application
    - 1. Small groups
  - 3. AED
    - 1. Basic use
    - 2. Shockable rhythms
      - a. Ventricular Fibrillation
        - i. Spasm like
      - b. Ventricular tachycardia
        - i. Too fast to be efficient
    - 3. Possible complications
      - a. Pregnant
      - b. Adult pads only
      - c. Child pads "attenuator" 50 jewels
      - d. Metal jewelry
      - e. Pace makers

- f. Water
- g. "Heart sandwich" due to space
- 4. Trouble shooting
  - a. Pad connector
  - b. Pad contact with the skin
    - i. Remove pad covers
  - c. Battery
- 4. Rescue Breathing
  - 1. Adult
    - a. One breath every 5 to 6 seconds
  - 2. Child and Infant
    - a. One breath every 3 to 4 seconds
- a. **Bleeding Control (major)**
  - 1. Types of Bleeds
    - a. Arterial
    - b. Venous
    - c. Capillary
  - 2. Internal bleeding
    - a. Bruising
    - b. Large irregular mass
    - c. Pulsating mass
    - d. Tenderness while palpated
  - 3. Direct Pressure
  - 4. Pressure Bandage (Emergency Bandage)
  - 5. Tourniquet
  - 6. Hemostatic dressing
    - a. Types of Hemostatic Dressings
      - i. Granular type (Not used)
      - ii. Sponge (Granular in mesh pouch)
      - iii. Impregnated Gauze
        - 1. Rolled
        - 2. "Z-Fold"
        - 3. 4x4 pads
        - 4. Trauma pads
    - b. State Approved Hemostatic Dressings (check for current changes)
      - i. Quick Clot<sup>®</sup>, Z-medica<sup>®</sup>
        - 1. Quick Clot Combat gauze<sup>®</sup>



2. Quick Clot EMS rolled gauze, 4x4 dressing, trauma pad
  - ii. Celox
    1. Celox Gauze, Z fold Hemostatic Gauze
    2. Celox Rapid, Hemostatic Z-fold Gauze
  - c. Indications (When to use it)
    - i. Severe Hemorrhage
    - ii. Area not allowing proper use of a tourniquet (i.e.: Shoulder, upper femoral
    - iii. Major open wound
  - d. Contraindications (When not to use it)
    - i. Thoracic cavity
    - ii. Abdominal cavity
    - iii. Pelvic region closest to reproductive organs
    - iv. Cranial cavity / skull
    - v. If seal had been previously broken
    - vi. Eyes
7. Wound Packing
  - a. Filling the void of the wound to create surface area to apply direct pressure
  - b. Start on the side of the bleed
    - i. Preferably using hemostatic impregnated gauze
    - ii. Regular gauze will work as well
  - c. Once filled or packed, place pressure over packing to slow or stop bleeding
  - d. Do not pack wounds when associated with the following areas
    - i. Thoracic cavity
    - ii. Abdominal cavity
    - iii. Pelvic cavity area near reproductive and urinary systems
  - e. Four P's of wound packing
    - i. Peel gauze off the roll
    - ii. Push gauze into wound against bleeding vessel
    - iii. Pile gauze above the level of the skin
    - iv. Pressure dressing over top of the wound
8. Wound packing Demonstration
  - a. Student practical application and demo of skill

**b. Bleeding Control (minor)**

1. Types of Wounds

- a. Abrasion
  - i. Scrape
  - ii. Treatment
- a. Keep clean and treat with dry sterile dressing Incision
  - i. Clean smooth edged slice type cut
  - ii. Treatment
    - 1. Direct pressure
    - 2. Keep clean and treat with dry sterile dressing
- b. Laceration
  - i. Jagged edged cut
    - 1. Sharp object
    - 2. Pressure from large object
  - ii. Treatment
    - 1. Do not apply pressure to exposed organs
    - 2. Loose wet sterile dressing if exposed organs
- c. Puncture
  - i. Deep wound
  - ii. Treatment
    - 1. Do not remove object if impaled
    - 2. Direct pressure
    - 3. Do not probe wound
- d. Avulsion
  - i. Torn or cut away piece of body
  - ii. Treatment
    - 1. Wrap in dry sterile dressing and stabilize
- e. Amputation
  - i. Removal of body extremity
  - ii. Treatment
    - 1. Consider tourniquet to stop bleeding
    - 2. Wrap amputated extremity in dry sterile dressing and place in plastic bag
    - 3. Place plastic bag in ice
- f. Impaled objects
  - i. Do not remove unless
    - 1. Impeding victims airway
  - ii. Treatment

1. Do not remove object
2. Stabilize in place with bulky dressing

a. **Shock**

- a. Life threatening condition
- b. Signs and systems
- c. Severity of injury
- d. Treatment
  - i. Control bleeding
  - ii. Maintain victims temperature
  - iii. Position patient for comfort and good circulation
  - iv. Monitor victim and prepare to transition to rescue breathing or CPR

a. **Traumatic Injuries**

1. Head Neck and Back Injuries
  - a. Possibilities of Brain or Spinal cord injury
  - b. Indications of Possible head or back injury
    - i. Mechanism of Injury
    - ii. Abnormal Mental status
    - iii. Abnormal Vital signs
    - iv. Visible injury
    - v. Appearance
      1. Fluids (Cerebral)
      2. Pupils (Unequal)
      3. Battle Signs
      4. Paralysis
      5. Priapism (Uncontrolled Penile erection)
      6. Projectile Vomiting
    - c. Treatment considerations
      - ii. Do not apply direct pressure
      - iii. Do not elevate victims legs
      - d. Spine immobilization
      - iv. Maintain head in position found and closest to neutral
      - v. C-spine
        1. What is it and how can we protect it
        2. C-Collar not recommended for basic First Aid

a. Facial Injuries

- i. Object in the eye
  1. Stabilize

2. Sympathetic eye movement
3. Do not remove object

ii. Chemicals in the eye

1. Flush with copious amounts of water

iii. Dental emergencies

1. Maintain airway
2. Transport tooth in moist dressing for possible reinsertion

iv. Nose bleeds

1. Lean slightly forward
2. Pinch nose midway between the bone and cartilage
3. If victim is unconscious
  - a. Recovery position
  - b. Monitor

**a. Chest and abdominal injuries**

a. Closed chest wound

- i. Flail Chest
- ii. Paradoxical Breathing
- iii. Collapsed lung
- iv. Treatment
  1. Monitor ABC
  2. Prepare to treat to shock

b. Open chest wound

- i. Occlusive dressing
  1. Chest seals

c. Closed abdominal wounds

- i. Position of comfort
- ii. Monitor

d. Open abdominal wounds

- i. Position of comfort
- ii. Knees up
- iii. Moist sterile dressing
- iv. Seal with occlusive dressing
- v. Protruding organs
  1. Don't move or repack

2. Bone, Joint, soft tissue and Muscle Injuries

a. Musculoskeletal system

- i. Bone

- ii. Joint
  - iii. Skeletal muscle
  - iv. Cartilage
  - v. Tendon
  - vi. Ligament
  - vii. Fractures
  - viii. Dislocations
  - ix. Sprains
  - x. Strains
- b. Care for soft tissue and bone injuries
- i. Basic R.I.C.E.
    - 1. Rest
    - 2. Ice
    - 3. Compress
    - 4. Elevate
  - ii. Splinting
    - 1. Immobilize injury
    - 2. Often involves joint above and below injury
    - 3. Material used
    - 4. Checking circulation, Motor, and sensory systems before and after
- c. Class practical application of splinting
- i. Groups given particular injury to dress and splint
  - ii. Possibility of wilderness first aid ideas
    - 1. Using sticks and items available in the outdoors to splint
  - iii. Have class groups teach back to class injury and how and why injury was splinted
3. Burns
- a. Severity of burns
    - i. First Degree
      - 1. Damage to outer most layer of skin (Epidermis)
    - ii. Second Degree
      - 1. Damage to first and second layer (epidermis and dermis)
      - 2. Blistering
    - iii. Third degree
      - 1. Damage through skin into fatty and muscular layers
      - 2. Referred to full thickness
  - b. First aid
    - i. Remove from Heat source

- ii. Cool area with water
  - i. Apply DRY sterile dressing loosely
  - ii. Treat for shock
- b. Chemical Burns
  - i. Remove chemical then flush area
  - ii. Treat like standard burn
- c. Electrical Burns
  - i. May have entry and exit wound
  - ii. Can cause injury to Heart, central nervous system and vital organs
- d. Radiation Burns
  - i. Consider scene safety
- e. Thermal Burns
  - i. Remove from heat source
  - ii. First and second degree use cool moist dressing
  - iii. Third degree use dry sterile dressing and treat for shock

**a. Violent Circumstances**

- a. Active Shooter
  - i. Tactical rescue and First aid considerations
    - 1. Movement to threat vs Casualty Care
    - 2. Life safety and neutralizing the threat is priority
    - 3. Rescue teams and triage
  - ii. Integration with EMS
    - 1. Rescue teams may include fire and ambulance personnel
  - iii. Tactical Emergency Care Concepts
    - 1. Threat suppression
    - 2. Hemorrhage control
    - 3. Rapid extraction
    - 4. Assessment by medical
    - 5. Transport
  - iv. Self-aid and buddy aid

**b. Medical Emergencies**

- 1. Cardiac Emergencies
  - a. Heart Attack/cardiac arrest
    - i. Pain, Discomfort, feeling of Pressure in chest
  - b. Coronary Artery Disease

- c. Early defibrillation
- 2. Respiratory Emergencies
  - a. Adequate breathing
    - i. Adult 12-20 per min
    - ii. Child 15-30 per min
    - iii. Infant 25-50 per min
  - b. Chronic Obstructive Pulmonary Disease (COPD)
    - i. Third leading cause of death in the US
  - c. Indicators of Respiratory problems
    - i. Breathing Rate
    - ii. Labored breathing
    - iii. Breath sounds
    - iv. Coloring
    - v. Mental status
- 3. Drowning
  - a. Dangers of rescue
  - b. Resuming respirations is priority
  - c. CPR can be started with breaths first because of respiratory arrest
- 4. Seizures
  - a. Electrical signals in the brain misfiring and causing involuntary movement or actions
  - b. Indicators
    - i. Staring
    - ii. Disoriented
    - iii. Lethargy
    - iv. Slurred speech
    - v. Staggering or impaired gait
    - vi. Multiple possible motor movements
  - c. Tonic and Clonic types
  - d. Treat by protecting victim and never restrain victim
- 5. Strokes
  - a. Blocked artery to the brain
  - b. Indicators
    - i. Mental status
    - ii. Mobility
    - iii. Vision
    - iv. Communication

- c. Transient ischemic attack (TIA)
  - i. Temporary stroke often overlooked
- d. Assessment and monitor
  - i. Protect paralyzed limbs from injury
- 6. Altered mental status
  - a. Symptoms
    - i. Confusion
    - ii. Anxiety
    - iii. Restlessness
    - iv. Combativeness
    - v. Sudden unconsciousness
  - b. Aid
    - i. Calm and reassure
    - ii. Change environments
    - iii. Identify possible causes
    - iv. Provide appropriate care
- 7. Severe Abdominal pain
  - a. Possible causes
    - i. Appendicitis
    - ii. Gall Bladder
    - iii. Kidney stones
    - iv. Internal bleeding
    - v. Gastrointestinal conditions
- 8. Allergic reactions and Anaphylaxis
  - a. Possible causes
    - i. Food
    - ii. Environment
    - iii. Medications
    - iv. Stings and bites
  - b. Anaphylaxis
    - i. Severe life threatening allergic reaction
      - 1. Blood vessels dilate to drop blood pressure
      - 2. Swelling of tissue that line respiratory system obstructing the airway
  - c. Epinephrine
    - i. Hormone produced by the body
      - 1. Constricts blood vessels
      - 2. Dilates bronchioles



- ii. Officer may assist with administration
      - 1. Proper training
      - 2. Proper prescription
  - d. Epinephrine Pen trainer learning activity
    - i. Show and monitor proper use of “Epi” pen trainer
- 9. Psychological emergencies
  - i. Variety of causes
    - 1. Existing mental illness
    - 2. Medications
    - 3. Involved in traffic collisions
    - 4. Victim of violent crimes
  - ii. Signs and symptoms mirror shock
- 10. Diabetic emergencies
  - a. Hypoglycemia
    - i. Low Sugar
    - ii. Insulin shock
    - iii. Sudden onset
    - iv. Most common
  - b. Hyperglycemia
    - i. High Blood Sugar
    - ii. Diabetic Coma
    - iii. Slow onset
  - c. Assess patient
    - i. In unconscious
      - 1. Recovery position and monitor
    - ii. If Conscious
      - 1. Position of comfort
      - 2. Administration of oral glucose
      - 3. Monitor
- 11. Poisoning and alcohol/ substance abuse
  - a. Attempt to determine the substance
  - b. Manner of exposure
    - i. Ingestion
    - ii. Inhalation
    - iii. Absorption
    - iv. Injection
    - v. Exposure to CBRN (Chemical, biological, radiological and nuclear)

1. Scene safety
2. Signs of exposure
  - a. Chemical
    - i. Powder or Liquid
    - ii. Appears as a burn
    - iii. Blistering / skin loss
  - b. Biological
    - i. Presents like an illness
    - ii. Takes time to present
    - iii. Example: small pox
  - c. Radiological
    - i. Exposure is contamination
    - ii. Used in medical treatments
  - d. Nuclear
    - i. Blast injuries
    - ii. Burns
    - iii. Instant injuries
- c. Assessment
  - i. Level of consciousness
- d. Treat by removing source
  - i. Contact poison control 800-222-1222
  - ii. Monitor and treat for shock
- e. Assisted Naloxone Administration (Narcan™)
  - i. Narcotic Antagonist in cases of overdose
  - ii. Officers may administer if approved by EMSA and medical director
  - iii. May result in immediate violent reaction
12. Environmental or Temperature related emergencies
  - a. Cold Related
    - i. Hypothermia
      1. Move victim to warm environment
      2. Re-warm victim slowly
      3. Encourage patient to move for warmth
    - ii. Frostbite
      1. Freezing of tissue
      2. Includes frost nip

- b. Heat Related
  - i. Heat cramps and Heat exhaustion
    - 1. Loss of sodium (Salt)
    - 2. Dehydration
  - ii. Heat stroke
    - 1. Internal body temperature rises abnormally high
    - 2. May cause swelling of the brain
  - iii. Treat by rapid cooling
  - iv. Treat for shock
- 13. Stings and bites
  - a. Insect Stings and Bites
    - i. Local swelling
    - ii. Minor pain
    - iii. Itching
  - b. Marine Life Stings
    - i. Pain
    - ii. Swelling
    - iii. Discoloration
    - iv. Apply heat to deactivate toxins
  - c. Spider bites
    - i. Apply ice to reduce swelling and slow rate of absorption
  - d. Snake bites
    - i. Fang marks
    - ii. Very severe
    - iii. Neutral position for affected area
    - iv. Calm victim
  - e. Animal or Human bites
    - i. Infection is most common problem
    - ii. Seek medical help and treat with normal first aid
  - f. Possibility of anaphylaxis shock
    - i. Assisted administration of auto-epinephrine injector (EPI Pen)
    - ii. Respiratory distress requiring immediate access to EMS
  - g. Demonstrate various case studies on bites

1. Child Birth

1. Normal labor and Childbirth

- a. Stages of birth
- b. Imminent birth
  - i. Contractions less than two minutes apart
  - ii. Urgent need to bear down
  - iii. Crowning present
  - iv. Amniotic sac has ruptured

2. Complications in childbirth

- a. Excessive bleeding prior to delivery
- b. Limb presentation
- c. Breach presentation
- d. Cord presentation
- e. Delayed delivery
- f. Newborn not breathing
  - i. Check for brachial pulse
  - ii. Prepare to begin CPR for infants
- g. Requires immediate transportation to emergency care

b. **Practical application test and procedure**

1. practical application for completion of the POST portal class
2. Students will be tested by demonstrating the skills
  - a. Assessment
  - b. Bandaging / bleeding control
    - i. Bandage
    - ii. Direct pressure
    - iii. Pressure bandage
    - iv. Tourniquet
    - v. Hemostatic gauze / wound packing
    - vi. Recovery position
    - vii. CPR / obstructed airway procedures
      1. Adult
      2. Child
      3. Infant
    - viii. Splinting
3. Written, oral and/or demonstration (in each topic)

c. **Safety protocols**

1. Monitor safety at all times
2. Only unarmed students allowed

- a. Weapons check prior to practical application
3. Everyone is a safety monitor
4. Appropriate attire
5. Discuss classroom emergency evacuation plans