EMT Skill Sheet

Skill #3 - Cardiac Arrest and AED
(2015 ECC AHA guidelines)

Student Name: _____ Pass date - _____

Evaluator Name_____ Signature: _____
(Sign if Student Passes Skill) Date

Dispatched:	Patient Contact:	Transported:	End of Call:		
Information on this skill can be found in the Text Book and on the class D2L website					**Comments**
SCENE SIZE-UP – Starts prior to Patient contact but continues throughout the call					
Takes, or verbalizes, body substance isolation precautions of Gloves & Eye Protection **(Critical Fail!)**					
Verbalizes Scene Size-up (Information from Dispatch and EMRs) – Safety **(Critical Fail!)**, Mechanism of Injury (MOI) – C-spine needed, Nature of Illness (NOI), Additional Resources, # of Patients					
For Cardiac Arrest Calls Team Members should be assigned prior to arrival (See Pit Crew - Page #3) ✓ 2 EMTs for Chest Compressions – 1 on each side of chest ✓ 1 or 2 EMT(s) on Airway – 1 EMT holding Double EC mask seal and 1 EMT ventilating ✓ 1 Team Leader – AED and Team Leading (documenting)					
PRIMARY ASSESSMENT (Primary Survey/Initial Assessment) - Done On Scene					
General Impression of the scene, patient & gathers information from EMRs or bystanders. Must observe: ✓ Unusual Environmental Factors (Hazards, Odors/Temperature, Lighting, Entrances/Exits, People) ✓ Patient's approximate Age, Sex, and Mental Status/ LOC (Level of Consciousness) ✓ Patient's Positioning, Level of Distress (Breathing/Pain), and any Gross Injuries seen ✓ Looking for Arterial Bleeding and ***≈If necessary*** - applying bleeding control as soon as possible					
Considers C-spine (Spinal Motion Restriction) for the Patient **(Critical Fail!)** – When in doubt – C-spine EMT should evaluate the scene for MOI (Mechanism of Injury). Does patient meet any of the following; • Significant MOI (MVC at high speed, Falls>20 feet) with Neck/Back Pain or Neurological deficit • Unresponsive/AMS (Altered Mental Status or Drugs/ETOH) patients with unknown history of event • Water related accidents, head/neck injuries, hangings If Yes to the above - Tell patient not to move and directs an EMT to hold manual stabilization (Skill #4)					
Note: The Evaluator states C-spine is not needed					
Identifies self by Name, Level of medical training, Agency & gets patient consent (Expressed/Implied)					
Determines responsiveness by AVPU (Awake, Responses to Verbal, Physical/Pain, Unresponsive) If patient is Alert must ask Person, Place, Time and Event Orientation Questions ✓ Should visualize for signs of Breathing in Mental Status assessment (Scan chest for rise and fall) ✓ Determines patient's condition and **calls for ALS** and AED (if necessary)					
≈If necessary - If CPR is in progress should evaluate quality of compressions and then requests the stopping of CPR to check pulse. May skip mental status assessment if CPR is in progress.					
Note: The Evaluator states Patient is Unresponsive					
≈If necessary - If patient is Unresponsive to Pain start with Circulation not Airway					
Circulation - **(Critical Fail!)** Pulse– assess for no more than 10 seconds • Unresponsive Patient – Adult/Child use Carotid pulse, Infant use Brachial pulse EMT may recheck pulse with patient movement or AED states no shock advised with prior defilations (NEVER check pulse right after defibrillation) - **Do not delay check compressions for pulse checks**					
Note: The Evaluator states Patient has no pulse					
If no pulse **Immediately** start Chest Compressions **(Critical Fail!)** ✓ Patient must be supine on hard flat surface (no beds except hospital beds with CPR feature) ✓ Compressions are hard and fast with full chest recoil (100 to 120 per minute) – Count out loud ✓ Location of Hand is on the center of the chest on the lower half of the sternum ✓ Switches chest compressors every 2 minutes (5 cycles) - may assess pulse (not after defibrillation) • Each compression is 2 – 2.4 inches deep for an Adult, 1/3 the depth of the chest or about 2 inches for a Child, and 1/3 the depth of the chest or about 1 ½ inches for an Infant with full recoil of the chest. Infant (1 month to 1 year) Child (1 year to puberty) Adult (puberty and up) ➢ Minimizes interruptions of chest compressions - no more than 10 seconds (except - ALS airway and moving the patient) **(Critical Fail!)** ➢ Start CPR in Infants and Children with Heart Rates < 60 bpm and signs of poor perfusion					
Considers AED placement if available and no pulse in patient **(Critical Fail!)** ✓ Checks for DNR (must be written and presented to EMTs) – Bracelets/necklaces					

✓ Turn on AED – follows audio prompts ✓ Attach pads to the patient's bare chest (dry chest if wet, shave as necessary, Do Not place pads over implanted medical devices) – rub pads completely to stick to patient's chest • Adult Pads (8 years old and up – May use Adult pads on Pediatric (no Pedi pads available) • Pediatric Pads (1 month to 8 years old) – MAY NOT BE USED ON ADULTS ✓ Pad Placement (all are acceptable by ECC 2015 guidelines) • Right upper chest under clavicle and left lateral under armpit • Anterior chest on Apex (heart) & Posterior Back behind heart (AP) – AP placement used in Pediatric Cardiac Arrests for most AEDs ✓ Analyze heart rhythm (Do not touch the patient or the AED during analysis) ✓ If shock is advised **EMTs should do compressions as AED charges** (ACLS) ✓ Clear Patient in **LOUD** voice prior to delivering the shock **(Critical Fail!)** ✓ **As soon as shock is delivered, Immediately resume Chest Compressions** ✓ Repeats AED sequence every 2 minutes **Chest compressions must have no more than 10 second pauses during Arrest!**  		
Airway - Assesses and Fixes **(Critical Fail!)** ✓ Listen for noise – snoring, stridor, gurgling, wheeze ✓ Smell for odors – ETOH (alcohol), emesis, ketones, unusual odors (must be within 3 feet of Head) ✓ Ask if patient if they are nauseated or had emesis Considers if Airway is Good (Adequate) or Bad (Inadequate) ➢ **Signs/Symptoms (s/s) that Airway is Patent/Adequate** – Patient is awake and maintaining their own airway, No abnormal noises heard (stridor, snoring, gurgling), Patient can speak clearly, No oral trauma or obstructions (blood, vomit, fluid, swelling) are noted ➢ **Signs/Symptoms that Airway is Inadequate** – Diminished level of responsiveness, Abnormal noises heard (stridor, snoring, gurgling), Drooling, Difficulty talking or speaking clearly, Actively vomiting If Airway is Inadequate or Patient with Altered Mental Status (AMS) - Open mouth and look for Obstruction – broken teeth, dentures, edema, emesis, blood (use light pen) **≈*If necessary*** – Fixes Airway (Skill #2) • Suctions patient as needed • Open and maintain airway with Head-Tilt Chin-Lift/Jaw-Thrust if patient is not maintaining Airway due to decreased mental status Considers Airway Adjunct for all Patient's with AMS - OPA or NPA		
Breathing - Assesses and Fixes **(Critical Fail!)** – This may be done in Mental status assessment **Breathing Assessment NOT required in Pulseless patients – Dead people never breathe**		
Directs 2 EMTs to Ventilate the Patient using BVM **(Critical Fail!) –** some systems use NRM O2 ✓ Opens airway with head tilt chin lift or jaw thrust and uses double EC clamp for mask seal ✓ Provides positive pressure ventilation - starts with 2 initial breaths with visible bilateral chest rise • Reposition airway if breath/ventilation does not produce viable chest rise Adult compression ventilation ratio – ✓ 30 Compressions with 2 Ventilations with each ventilation lasting 1 second Infant/ Child compression ventilation ratio – ✓ 30 Compressions with 2 Ventilations (Single EMT) with each ventilation lasting 1 second ✓ 15 Compressions with 2 Ventilations (Multiple EMTs) - each ventilation lasting 1 second **≈If necessary –** Rescue Breathing (patients with pulse but inadequate ventilations) ✓ Adult – 1 ventilation every 5 to 6 seconds with each ventilation lasting 1 second ✓ Infant/Child - 1 ventilation every 3 to 5 seconds with each ventilation lasting 1 second ➢ BVM ventilations must produce visible bilateral rise and fall of patient chest **(Critical Fail!)**		
Directs EMTs to hook up BVM to Oxygen - Oxygen flow to no less than 15 liters/minute (may be performed at any time in the skill as long as it is in the first minute of BVM ventilations)		
≈If necessary - CPR with Advanced Airway in place (**Asynchronous**) must do continuous compressions at 100-120 per min. with 1 breath every 6 seconds		
Deformities - Assesses and Fixes (**Arterial Bleeding**) by; Rapid Scan (Medical Patients) - Anterior and Posterior with Visualization/Palpation (30 – 60 seconds) ✓ Visualize (**≈*If necessary*** - Touch as needed) of Patient to check for Arterial bleeding, deformities, or incontinence (urine/feces). Runs hands bilateral posterior sides looking for bleeding. **≈*If necessary*** - Provides appropriate bleeding control - not needed for Dead patients		
Expose and Examine - To the appropriate level (Age, Mental status, Injury, Environment)		

✓ Head and Chest should be exposed in the Primary Assessment for Critical Patients (Head Coverings and Shirt/Bra) – Other exposing can be done later in the secondary assessment ✓ Look for Medial Alert necklaces or bracelets		
EMT considers and verbalizes – Patient Priority (Life Threats) – is ALS enroute? ✓ Appears – Stable (Little Sick); Potentially Unstable (possible Big Sick); Unstable (Big Sick)		
Repeats AED sequence every 2 minutes ✓ Documents number of Shocks or No Shocks advised for ER ✓ Pulse Check every change in rhyme (Shocking than No Shock Advised) no more than 10 seconds ✓ BLS may check pulse every few minutes (not required by AHA for BLS)		
Gets Patient's Demographical Info (legal name, age, birthday, full address, phone, insurance/hospitals) **Written History must be neat & organized and given to transporting EMTs and/or ER staff** ✓ Patient's ID and insurance cards ✓ If at medical facility must get copy of patient's medical record and DNR (POLSE form) ✓ Family names and patient's Medical Power of Attorney (POA) contact info		
Gathers additional information about arrest event – SAMPLE history ✓ **S**igns and symptom prior to arrest - (chest pain, shortness of breath, sweating (diaphoresis), dizziness, weakness, trouble walking (ataxia), headache, nausea/emesis, recent illness/trauma) ✓ **A**llergies to medications ✓ **M**edications used to include OTC, Drugs/ETOH and birth control (females' child bearing age) ✓ **P**ertinent Past Medical History (diabetes, hypertension, cardiac disease, COPD, asthma) Surgeries, Hospitalizations, ER Visits (where/when/why) and Smoking ✓ **L**ast Meal or oral ingestion (menstrual period, pregnancy in females) ✓ **E**vents about Cardiac Arrest – what was the patient doing before cardiac arrest (resting, sleeping, exerting themselves) and events about arrest (trauma, strike head with fall, seizure)		
Gets and documents the time of Arrest (exact time of cardiac arrest) – Witnessed or Unwitnessed		
Secures the patient to the long board for possible transport (no chest straps)		
Considers Extrication to ambulance and Transport Decision (Definitive care) ✓ AEDs cannot analyze or shock in a moving ambulance (must stop ambulance to use) **BLS transport Guidelines (no single national standard, local Protocols dictate) without ALS** 1. EMTs should stay on scene to run cardiac arrest with CPR & AED until ROSC (Return of Spontaneous Circulation) or Discontinuation of arrest by on-line or off-line Medical direction (or Protocol) OR 2. Patients under CPR should be transported to the closest Hospital after 10/20 minutes CPR & AED (or Protocol)		
If ROSC (Return of Spontaneous Circulation) must; ✓ Assess pulse every 30 seconds or continuously ✓ Leave the AED pads on patient but turn off the AED ✓ Titrate Oxygen to SpO2 greater or equal to 94% ✓ Check/fix Breathing (Rescue Breathing) and get Vital signs ✓ **Rapid Transport of all patients with ROSC to Resuscitation Centers** with PCI (Percutaneous Coronary Interventions) and Therapeutic Hypothermia Treatments after cardiac arrest (or Protocol) Coronary angiography should be performed emergently for Out of Hospital Cardiac Arrest patients with suspected cardiac etiology of arrest and ST elevation on ECG. (Class I, LOE B-NR)		
Contacts Medical Control and/or documents Standing Orders/Protocols followed		
Note: Student should continue cardiac arrest until instructor directs you to stop		
More than 4 missed points results in Failure Total Missed Points		

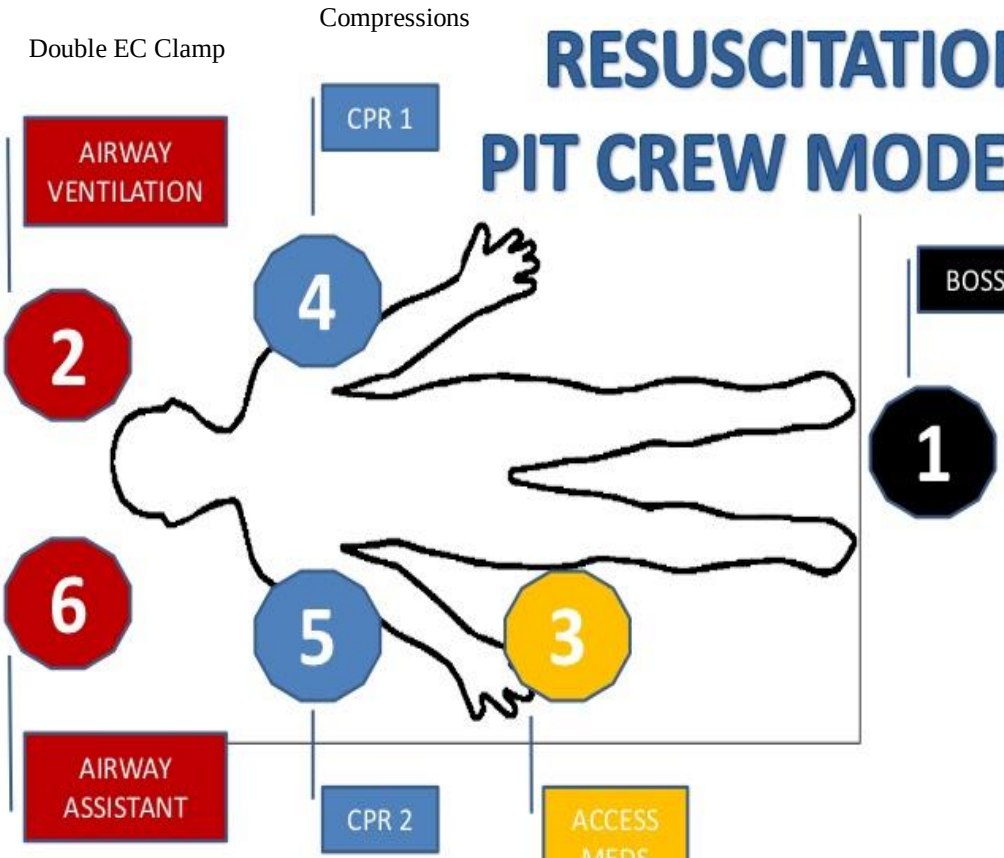
✓	Actions performed and/or verbalized by student when doing skill
➢	Additional information on the procedure
•	Key Points that student should know but do not need to verbalized/do unless asked

Evaluator Comments:

Additional information and 2015 Guideline changes (AHA recommendations level)

1. Chest compressions rate is 100 to 120 compressions per minute at 2 to 2.4 inches (5-6 cm). (Class IIa, LOE C-LD)
2. Some EMS Systems do not use BVM in CPR but do continuous compressions and put the patient on a NRM at 15 LPM. EMS systems that use bundles of care involving continuous chest compressions, the use of passive ventilation techniques may be considered as part of that bundle. (Class IIb, LOE C-LD)
3. It is recommended the CPR should use Metronomes or a timing device to improve quality of CPR. It may be reasonable to use audiovisual feedback devices during CPR for real-time optimization of CPR performance. (Class IIb, LOE B-R)
4. Some systems utilize mechanical piston compression devices (Lucas, etc.). Manual chest compressions remain the standard of care for the treatment of cardiac arrest, but mechanical piston devices may be a reasonable alternative. The use of mechanical piston devices may be considered in specific settings where the delivery of high-quality manual compressions may be challenging or dangerous for the provider (eg, limited rescuers available, prolonged CPR, during hypothermic cardiac arrest, in a moving ambulance (Class IIb, LOE C-EO)
5. Some systems may use 2 AED or Defibrillators to shock patients with recurrent VF/VT. This is called Double Sequential External Defibrillation.
6. If an AED prior to ECC 2005 standards is used (3 stacked shocks with 1 minute of CPR). Follow all AED prompts except resume CPR after defibrillation (DO NOT CHECK PULSE). Do not turn off the AED to try and override sequence, this delays defibrillation)

Pit Crew/High-Fidelity/High Performance CPR



Double EC Clamp

Compressions

Team Leader
AED
Recorder

If Available: OPA
Oxygen
Ventilate

Compressions
Ventilate if no
2ed Airway EMT

ALS if Available

If no second EMT for Airway
Airway EMT must perform except Ventilation