

MODULE OF SKILL LABORATORY PRACTICE

BLOCK : DISASTER RELIEVE MEDICINE
TOPIC : BASIC CARDIAC LIFE SUPPORT & AUTOMATED EXTERNAL DEFIBRILATORS(AED)

I. GENERAL OBJECTIVE

After completion of skill laboratory practice the student will be able to perform Basic Cardiac Life Support and using AED intervention for adults patients

II. SPECIFIC OBJECTIVES

At the end of skill laboratory practices, the student will be able to perform understand the procedure of BCLS and AED including:

- a. Basic Cardiac Life Support Algorithm
- b. High Quality CPR
- c. Defibrillation with AED
- d. Sign of return of spontaneous circulation
- e. Recovery Position

III. SYLLABUS DESCRIPTION

Sub Module Objective

After finishing skill practice of Basic Cardiac Life Support & AED, the students will be able to:

1. Recognize of cardiac arrest and activation of the emergency response system
2. Performing Early High Quality CPR to keep oxygen-rich blood flowing and to help delay brain damage and death
3. Performing Early defibrillation with an automated external defibrillator (AED) to help restore an effective heart rhythm and significantly increase the patient's chance for survival

Expected Competencies

Student will be able to demonstrate procedure of BCLS algorithm and AED in patients with cardiac arrest

Methods

- a. Demonstration
- b. Coaching
- c. Self practices

Laboratory Facilities:

- a. Class Room
- b. Reading Material
- c. Trainers

d. Student Learning Guide

Equipment

- a. AED Machine
- b. Manequin for BCLS

Venue

Training room (Skills Laboratory)

Evaluation

- a. OSCE
- b. Point nodal evaluation

IV. Equipment arrangement

All equipment required for this topic include :

- a. Multimedia equipment
- b. Manequin

V. LEARNING GUIDE

BASIC CARDIAC LIFE SUPPORT & AED CHECKLIST				
NO	STEPS	SCORE		
		0	1	2
1.	Ensure scene safety.			
2.	Check for response. Confirm cardiac arrest: check for sign of pulse and breathing Look for no breathing or only gasping and check pulse (simultaneously). Is pulse definitely felt within 10 seconds?			
3.	Shout for nearby help/activate the resuscitation team; can activate the resuscitation team at this time or after checking breathing and pulse.			
4.	If normal breathing and has pulse Monitor until emergency responders arrive.			
5.	If no normal breathing but still has pulse Provide rescue breathing: <ul style="list-style-type: none">• 1 breath every 5-6 seconds, or about 10-12 breaths/min.• Activate emergency response system (if not already done) after 2 minutes.• Continue rescue breathing; check pulse about every 2 minutes. If no pulse, begin CPR• If possible opioid overdose, administer naloxone if available per protocol.			
6.	If No breathing or only gasping and no pulse <ul style="list-style-type: none">• Start High Quality CPR• Begin cycles of 30 compressions and 2 breaths.			

	<ul style="list-style-type: none"> • Use AED as soon as it is available. 			
7.	<p>High Quality CPR</p> <p>To ensure optimal patient outcomes, high-quality CPR must be performed. You can ensure high-quality CPR by providing high-quality chest compressions, making sure that the:</p> <ul style="list-style-type: none"> • Patient is on a firm, flat surface to allow for adequate compression. • The chest is exposed to ensure proper hand placement and the ability to visualize chest recoil. • Hands are correctly positioned with the heel of one hand in the center of the chest on the lower half of sternum with the other hand on top. • Arms are as straight as possible, with the shoulders directly over the hands to promote effective compressions. Locking elbows will help maintain straight arms. • Compressions are given at the correct rate of at least 100 -120 per minute, and at the proper depth of at least 2 inches for an adult to promote adequate circulation. • The chest must be allowed to fully recoil between each compression to allow blood to flow back into the heart following the compression. • Avoid over ventilation • Minimize interruption during compression • For adult patients, CPR consists of 30 chest compressions followed by 2 ventilations. 			
8.	<p>When the second rescuer arrives, provide 2-person CPR and use AED/defibrillator.</p>			
9.	<p>Turns on the AED machine</p>			
10.	<p>Patient Preparation:</p> <ul style="list-style-type: none"> • Make sure the patient's chest is clearly exposed and dry. • Remove any medication patches with a gloved hand. • If necessary, remove or cut any undergarments that may be in the way. The pads need to be adhered to the skin for the shock to be delivered to the heart 			
11.	<p>Attaches AED pads:</p> <ul style="list-style-type: none"> • Apply the appropriate-sized pads for the patient's age in the proper location on the bare chest. • Use adult pads for adults and children over the age of 8 years or over 55 pounds. • Place one pad on the upper right chest below the right clavicle to the right of the sternum; place the other pad on the left side of the chest on the mid-axillary line a few inches below the left armpit. 			

12.	Plug in the connector, and push the analyze button, if necessary. <i>(Most AEDs available today have their pads pre-connected and will automatically analyze once the pads are applied to the chest)</i>			
13.	When “clear” is announced, have the rescuer performing the compressions stop compressions and hover a few inches above the chest, but remain in position to resume compressions immediately after a shock is delivered or the AED advises that a shock is not indicated.			
14.	<ul style="list-style-type: none"> • Observe the AED analysis and prepare for a shock to be delivered if advised. • Ensure that everyone is clear of the patient before the shock is delivered. • Remember that the AED delivers an electrical current that could injure anyone in contact with the patient. • Have the rescuer in the hover position ready to resume compressions immediately after a shock is delivered or the AED advises that a shock is not indicated. 			
15.	<p>If Shock advised by the AED Analysis:</p> <ul style="list-style-type: none"> • Give 1 shock. Resume CPR immediately for about 2 minutes (until prompted by AED to allow rhythm check). Continue until ALS providers take over or victim starts to move. • Says “clear”*, and ensures no one is touching the patient while shock being delivered • Then Presses shock button to deliver shock within 10 seconds • After the shock is delivered, immediately resumes the chest compressions 			
16.	<p>If Shock non-Advised by the AED Analysis,</p> <ul style="list-style-type: none"> • Resume CPR immediately for about 2 minutes (until prompted by AED to allow rhythm check). • Continue until ALS providers take over or victim starts to move. 			
17.	<p>Remember:</p> <ul style="list-style-type: none"> • Do not use alcohol to wipe the patient’s chest dry, Alcohol is flammable. • Do not touch the patient while the AED is analyzing. Touching or moving the patient may affect analysis. • Do not touch the patient while the device is defibrillating. You or someone else could be shocked. • Do not defibrillate someone when around flammable or combustible materials, such as gasoline or free-flowing oxygen. 			

18.	If ROSC, assess the patient vital sign periodically and continuously. put the patient in recovery position and prepare for transfer to the hospital for advanced management.			
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VI. CRITERIA OF PERSONAL PERFORMANCE EVALUATION

SCALE	PERFORMANCE ACHIEVEMENT	COMMENT
1	If students are doing the task that only fill less than 35% of whole items for each step precisely	LOW
2	If student are doing the task that only fill 35% - 60% from whole items for each step precisely	MILD
3	If student are doing the task that only fill 60% - 78% from whole items for each step precisely	MODERATE
4	If student are doing the task that fill at least 80% from whole items for each step precisely	EXCELLENT

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