

Life Support Ghana

Course Outlines

A. BASIC LIFE SUPPORT – HEALTHCARE AND COMMUNITY OPTIONS

Target Audience: General public, healthcare professionals

Community Option for general public: Emphasis will be placed on first aid and CPR with introduction to AED.

Healthcare professionals: Emphasis will be on CPR and detailed usage of AED in healthcare settings.

Time commitment: 4-10 hours depending on prior knowledge. Participants must pass an exam with at least 70% of the questions correct to obtain a certificate valid for one year. Annual refreshers are required to maintain certifications. Questions are tailored towards what was emphasized in the course.

1. Basic simplified anatomy of the heart, lungs and brain as it relates to resuscitation

Trainees will learn the importance of getting blood and oxygen to the brain as early as possible in cardiac arrest and other emergencies.

2. Duties, responsibilities and limitations of the first aid rescuer

Trainees will learn how to:

- (i) Overcome the 5 fears that prevent bystanders from helping victims
- (ii) Assess the scene, call for help, take universal precautions, find the problem and protect the victim's privacy.

3. Common Medical Emergencies and Best First Aid Practices

Participants will be taught to recognize and administer the appropriate first aid for the following common conditions:

Condition	Summary of learning objectives
Breathing problems	Recognize common conditions like asthma attack and proper use of inhalers
Choking	How to identify a choking victim and how to perform abdominal thrusts (also known as the Heimlich maneuver) in adults and children
Allergic reactions	Recognize mild and severe reactions, anaphylaxis, how to use an Epipen.
Heart attack	Recognize signs and symptoms, and first measures like giving Aspirin
Fainting	What is fainting, how to help the person who just fainted, get ready for CPR if needed
Stroke	Recognize signs of stroke using the FAST acronym: Face, Limbs (Appendages), Speech, Time sensitive

Seizure	What to do during and after a seizure episode before professional help arrives
Diabetes with low blood sugar	Recognizes signs and symptoms of low blood sugar and what to do about it
Bleeding from injury	How to safely apply pressure, how to apply a tourniquet and how to stay away from infection in the process
Fractures	Recognize closed and open fracture, simple splinting, recognize if person is in shock, limb elevation.
Others	Other emergencies like burns, electric shock, workplace injuries, snake bites will be taught depending on audience needs.

3. Cardiopulmonary resuscitation (CPR)

CPR is what can save the life of a victim that has suffered sudden cardiac arrest. When a bystander knows how to properly perform CPR, chances of survival increases from close to zero to 20%, and with the use of AED, chances can increase to as much as 45%. In this course, participants will learn the following skills:

Questions

Is the scene safe?

Is the victim responsive?

How do you call for help in one rescuer and two rescuer situations?

Does the victim have a pulse

How do I perform chest compressions?

Is the airway open?

How do I give rescue breaths if victim is not breathing?

What is an AED? How does it work?

Summary

Ensure the safety of the scene before entry
Participants will learn how to determine if someone is just unconscious or unresponsive and need CPR

Participants will learn the sequence of events – how to call for help and how to call for an AED if one is available.

Participants will learn an easy way to check for a pulse and how much time to spend doing so.

Trainees will learn identification of landmarks, rate and depths of quality chest compressions.

Proper head tilt and chin lift will be taught. Learners will practice how to check for foreign objects and how to handle the victim with suspected spinal cord injury.

How to give breaths, how many breaths to give and what to look for in effective breath giving will be practiced.

Participants will be introduced to both the AED trainer and real AEDs. They will handle it and be familiar with all the parts and how it is deployed.

4. Automated External Defibrillator

An AED, or automated external defibrillator, is a device that can detect and treat, through electrical energy, the lethal arrhythmias known as ventricular fibrillation and ventricular tachycardia. These rhythms are a common cause of sudden cardiac arrest. In developed countries AEDs can be found in any place that people gather: work places, supermarkets, airports, schools, churches, gyms etc.

Participants will learn how to:

- (i) Turn on an AED
- (ii) Attach AED Pads to a victim undergoing CPR
- (iii) Clear the person if shock is advised
- (iv) Continue CPR after shock is delivered or if shock is not advised

B. ADVANCED LIFE SUPPORT FOR THE WORK PLACE

This course is designed for selected individuals in organizations recognized as first aiders. The course will emphasize ALL the following in detail: First aid, CPR and AED usage. Other topics include how to maintain the first aid kit and proper working of an AED.

C. ADVANCED CARDIAC LIFE SUPPORT (ACLS)

ACLS is a set knowledge and skills to deploy measures for the emergent treatment of cardiac arrest, stroke and other life-threatening cardiovascular emergencies. Only highly trained healthcare personnel are qualified for this training. Elsewhere, ACLS is performed routinely in hospitals and in the field (by emergency medical technicians) for victims of the above conditions. However, in Ghana, it is mostly non-existent. Life Support Ghana offers this training to boost the skills of Ghanaian doctors, advanced nurses and ambulance personnel.

Target: Doctors, emergency room and intensive care nurses, ambulance personnel

Time commitment: 12-16 hours including passing 80% of test questions.

- (i) All of the Basic Life Support measures outlined above
- (ii) How to recognize the following electrocardiograms (ECG) that require advanced interventions: bradycardia, supraventricular tachycardia, first, second and third-degree heart blocks, ventricular tachycardia, ventricular fibrillation and asystole.
- (iii) The appropriate interventions for each of the ECG findings in (ii) above
- (iv) Advanced airway and management of respiratory arrest
- (v) CPR and AED Practice and Testing
- (vi) Cardiac Arrest (Ventricular Fibrillation/Pulseless Ventricular Tachycardia)
- (vii) Bradycardia/PEA/Asystole
- (viii) Tachycardia, Stable and Unstable
- (ix) The Megacode and the Resuscitation Team Concept
- (x) ACLS drugs, doses and when to administer them

D. RESOURCES FOR TRAINING

Life Support Ghana has highly trained personnel and state-of-the-art equipment and resources for all the trainings outlined above

1. Training Personnel

a. Dr. George B. Kyei, MD, MPhil, Dip. Stats, PhD

Director of Training and Research, Life Support Ghana

Dr. Kyei graduated from the University of Ghana Medical School in 1998. He is registered with the Ghana Medical and Dental Council. Dr. Kyei is also board certified in Internal Medicine by the American Board of Internal Medicine and certified by the American Heart Association in Basic Life Support and Advanced Cardiac Life Support. He has extensive experience working in hospitals in the United States in acute care settings supervising ACLS Megacode during cardiac arrest situations.

b. Dr. Emmanuel Maurice Ankrah, MD, LL

Director of Operations, Life Support Ghana

Dr. Ankrah is a practicing physician and lawyer. He is responsible for training in medico-legal aspects of life support and medical ethics.

2. Equipment and other resources

Life Support Ghana has the most advanced resources for training.

- (i) Advanced adult, child and infant manikins with electronic sensors to monitor depth and speed of chest compressions, from Prestan
- (ii) AED trainers and real AEDs from Philips Medical
- (iii) Rescue breathing kits
- (iv) First Aid kits
- (v) Audiovisual materials
- (vi) Manuals and workbooks for trainees from American Heart Association
- (vii) Brochures and pocket guidelines for easy reference
- (viii) Recommended Trainer: Trainee ratio of 1:6
- (ix) Spacious air-conditioned training space



Training



Manikins



Trainer AEDs



AED



Training manuals and DVDs