Basic Life Support (BLS)
Chain of Survival

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Fundamentals of First Aid and Emergency Care for Radiography

Medical Technical Radiology Department

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Student Learning Outcomes

By the end of this course, students will be able to:

- Understand the importance of Basic Life Support.
- Familiarize ourselves with the steps of BLS.
- Learn how to perform cardiopulmonary resuscitation (CPR) effectively.
- Gain confidence in responding to common life-threatening emergencies.

Why BLS Matters:

BLS serves as the crucial bridge between the onset of a medical emergency and the arrival of advanced medical care.

Immediate intervention through BLS can significantly improve a patient's chances of survival and reduce the risk of long-term complications.

Resuscitation research continues to show that **high-quality CPR** increasing **survival rates** for hospital discharge.

Key Components of BLS:

Recognition of Cardiac Arrest: Identifying signs of cardiac arrest, including unresponsiveness and absence of breathing or abnormal breathing patterns.

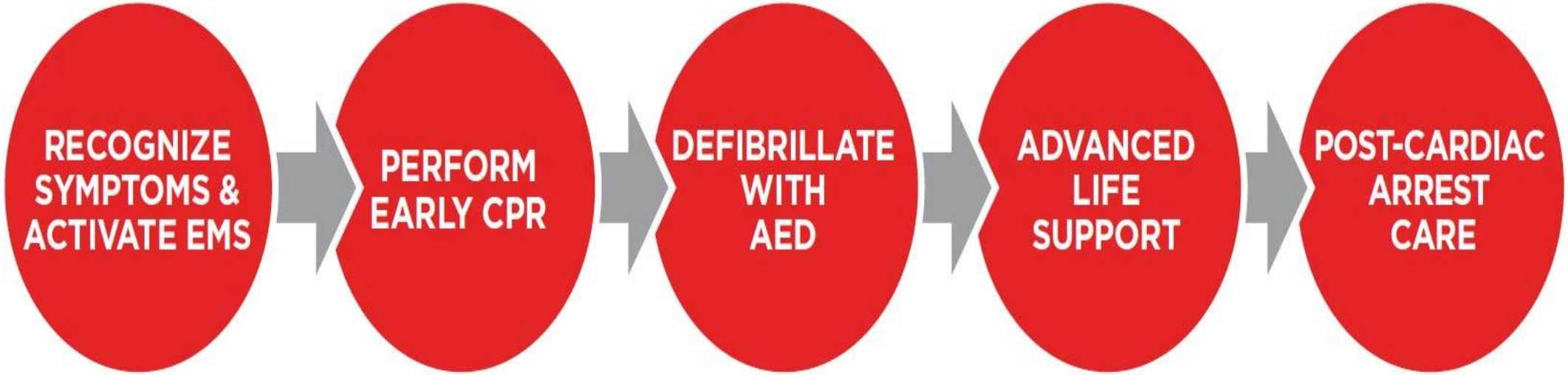
Activation of Emergency Response: Quickly activating emergency medical services (EMS) by calling for help or activating an emergency response system.

CPR (Cardiopulmonary Resuscitation): Performing chest compressions and rescue breaths to maintain blood circulation and oxygenation.

Defibrillation: Utilizing automated external defibrillators (AEDs) to deliver an electric shock to restore normal heart rhythm in cases of ventricular fibrillation or pulseless ventricular tachycardia.

Adult Chain of Survival

Early initiation of BLS has been shown to increase the probability of survival for a person dealing with cardiac arrest. To increase the odds of surviving a cardiac event, the rescuer should follow the steps in the Adult Chain of Survival.



Adult Chain of Survivals

Step 1: Recognize symptoms and activate EMS by calling …….

Step2: Perform early CPR by providing high quality chest compressions to circulate oxygen.

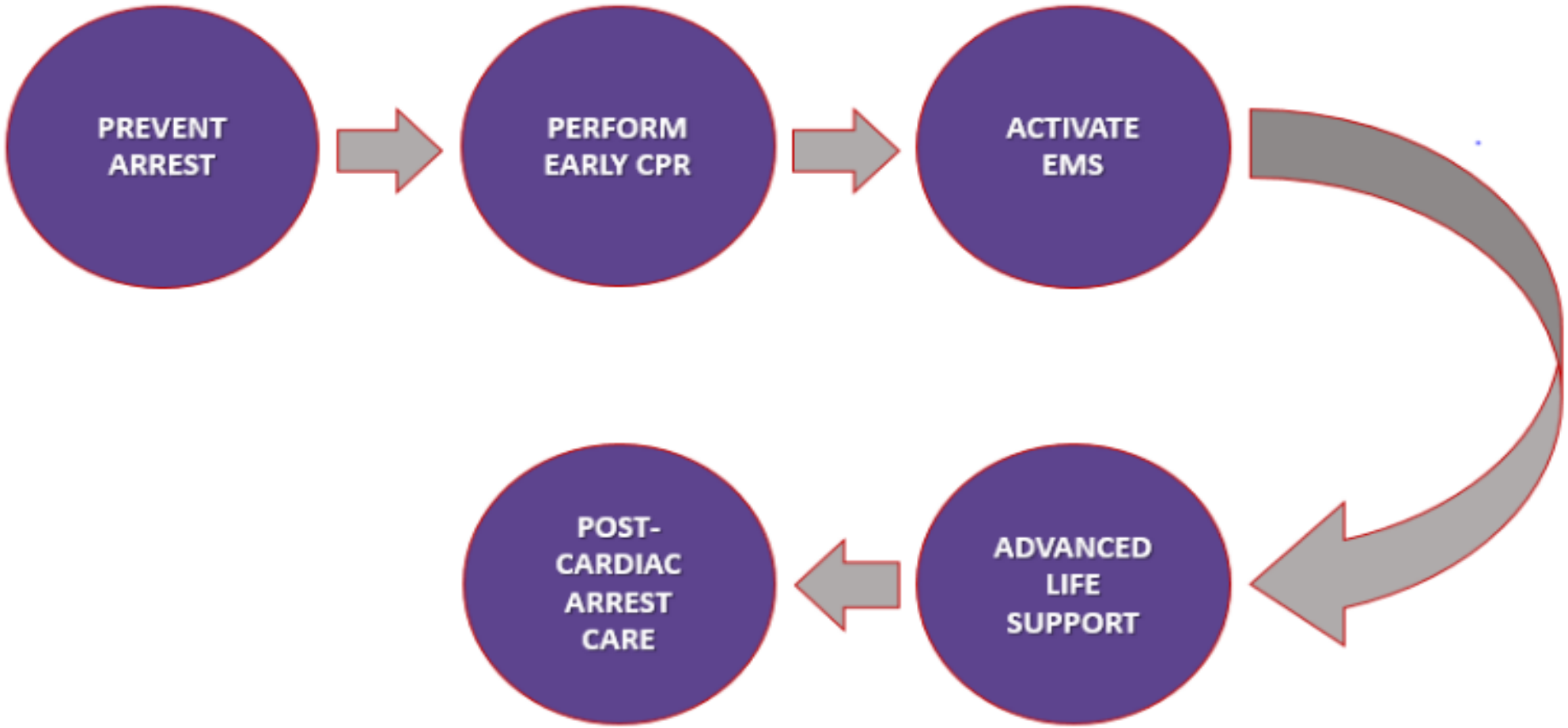
Step 3: upon the arrival of the AED, turn in on and follow the prompts (defibrillate if advised)

Step 4 &5:

Once the EMS arrive they will provide advanced life support to the individual. When the individual become stable and is taken to the hospital, they will receive post-cardiac arrest care.

Pediatric Chain of Survival

Emergencies in children and infants are not usually caused by the heart. Children and infants most often have breathing problems that trigger cardiac arrest. The first and most important step of the Pediatric Chain of Survival is prevention.



How to prevent cardiac arrest in children

Common causes of cardiac arrest

1. Bronchospasm
2. Burns
3. Drowning
4. Dysrhythmias
5. Foreign body aspiration
6. Gastroenteritis
7. Sepsis
8. Seizure
9. Trauma

One-Rescuer BLS/CPR for Adults

1.Be Safe:

Move	Move the person out of traffic.
Move	Move the person out of the water and dry the person. (Drowning persons should be removed from the water and dried off; they should also be removed from standing water, such as puddles, pools, gutters, etc.)
Be	Be sure you do not become injured yourself.

2. Assess the person

Shake the person and talk to them loudly.

Check to see if the person is breathing. (Agonal breathing, which is occasional gasping and is ineffective, does not count as breathing.)

3.Call EMS

Send someone for help and to get an AED.

If alone, call for help while assessing for breathing and pulse. (The AHA emphasizes that cellphones are available everywhere now and most have a built-in speakerphone. Call for help without leaving the person.)

4. CPR

CHECK PULSE

BEGIN COMPRESSIONS
AND DELIVERING BREATHS.

5. Defibrillate

Attach the AED when available.

Two-Rescuer BLS/CPR for Adults

Many times there will be a second person available that can act as a rescuer. The AHA emphasizes that cell phones are available everywhere now and most have a built-in speakerphone.

Direct the second rescuer to call …. without leaving the person while you begin CPR. This second rescuer can also find an AED while you stay with the person. When the second rescuer returns, the CPR tasks can be shared:

Two-Rescuer BLS/CPR for Adults

- The second rescuer prepares the AED for use.
- You begin chest compressions and count the compressions out loud.
- The second rescuer applies the AED pads.
- The second rescuer opens the person’s airway and gives rescue breaths.
- Switch roles after every five cycles of compressions and breaths. One cycle consists of 30 compressions and two breaths.

Two-Rescuer BLS/CPR for Adults

be sure that between each compression you completely stop pressing on the chest and allow the chest wall to return to its natural position. Leaning or resting on the chest between compressions can keep the heart from refilling in between each compression and make CPR less effective.

Rescuers who become tired may tend to lean on the chest more during compressions; switching roles helps rescuers perform high-quality compressions.

Two-Rescuer BLS/CPR for Adults

Quickly switch between roles to minimize interruptions in delivering chest compressions.

When the AED is connected, minimize interruptions of CPR by switching rescuers while the AED analyzes the heart rhythm. If a shock is indicated, minimize interruptions in CPR. Resume CPR as soon as possible.

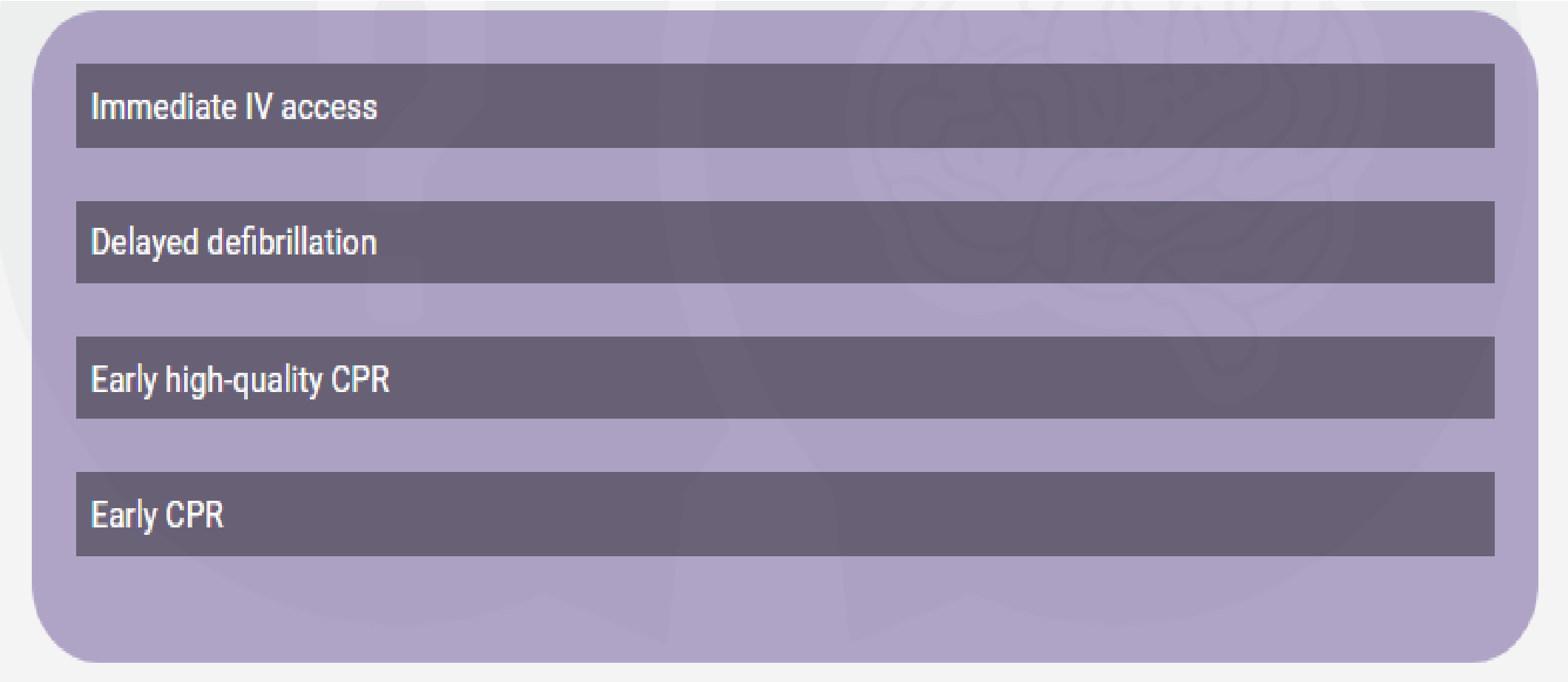
Following are the steps of initiating the adult chain of survival. List the steps in a chronological order

- Perform early CPR
- Defibrillate with AED
- Advanced life support
- Recognize symptoms and activate EMS
- Post-cardiac arrest care

Following are the steps of initiating the adult chain of survival. List the steps in a chronological order

Recognize symptoms and activate EMS	1
Perform early CPR	2
Defibrillate with AED	3
Advanced life support	4
Post-cardiac arrest care	5

What does BLS prioritize?



Immediate IV access

Delayed defibrillation

Early high-quality CPR

Early CPR