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Hands-on Training in Adult Cardiopulmonary Resuscitation

Experiment 15 - Practical Notes

Name: _____ Roll no.: _____ Date: _____

Aim

To practise adult basic life support and AED use on a training manikin under a qualified instructor.

Principle

Early recognition, activation of emergency help, effective chest compressions and defibrillation when indicated improve the response to cardiac arrest. The adult manikin sequence below follows current basic-life-support principles; it is a supervised skills exercise.

Requirements

- Qualified CPR instructor, adult feedback manikin, AED trainer and compatible training pads.
- Firm training surface, barrier/bag-mask trainer when taught and performance checklist.

Procedure

1. Recognise and activate

Check scene safety and responsiveness. In the simulation, recognise absent or abnormal breathing, including gasping; summon help, activate the local emergency system and request an AED. A trained healthcare rescuer checks pulse and breathing together for no more than 10 seconds; a lay rescuer does not delay CPR to check a pulse.

2. Position for compressions

Place the manikin on a firm surface. Put the heel of one hand on the centre/lower half of the sternum, place the other hand over it, keep arms straight and shoulders over the hands.

3. Compress effectively

Practise 100-120 compressions per minute, at least 5 cm depth while avoiding greater than 6 cm in an average adult. Allow full recoil and minimise interruptions; use the feedback device to check performance.

4. Add breaths when trained

Before an advanced airway, trained rescuers practise 30 compressions followed by 2 breaths. Each breath is delivered over about 1 second with visible chest rise, avoiding excessive ventilation. Untrained rescuers practise compression-only CPR as instructed.

5. Use the AED trainer

Turn it on, expose the manikin chest and attach pads as illustrated by the trainer. Ensure everyone is clear during analysis and simulated shock, then resume compressions immediately as prompted.

6. Continue and review

In team practice, rotate the compressor about every 2 minutes with minimal interruption. In an actual event, continue until professional takeover, signs of normal breathing/response, exhaustion or an unsafe scene, as guided by the dispatcher/instructor.

Observations and Record

Skill	Target / record	Instructor feedback
Recognition / emergency activation	_____	_____
Rate / depth / recoil	100-120/min; 5-6 cm adult target	_____
Breaths / interruption / AED safety	_____	_____

Worked Example

The numbers below are illustrative; enter your own observations in the record.

- At 110/min, 30 compressions take about 30/110 × 60 = 16.36 seconds before breaths. Timing alone does not establish adequate depth or recoil.

Result

Record instructor-observed performance for recognition, compressions, ventilation and AED use, with the specific skill to improve.

Precautions

- Practise compressions and shocks only on the manikin/AED trainer, never on a healthy person.
- This note covers adult basic life support. Child, infant, drowning and advanced-airway protocols require their specific training.
- Do not pause compressions unnecessarily or touch the manikin during simulated AED analysis/shock.

Viva Questions and Answers

1. Is gasping normal breathing in an unresponsive adult?

No. It can be a sign of cardiac arrest.

2. Why allow recoil?

Recoil supports venous return between compressions.

3. Why resume CPR immediately after an AED shock?

Circulation may remain inadequate and compressions should not be delayed.

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