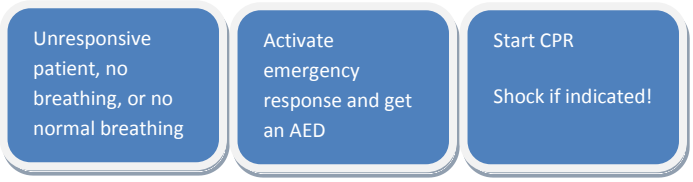
ACLS Study Guide 2011

The ACLS Provider exam is 50-mutiple choice questions. Passing score is 84%. Student may miss 8 questions.
For students taking ACLS for the first time or renewing students with a current card, exam remediation is permitted should student miss more than 8 questions on the exam. Viewing the ACLS book ahead of time with the online resources is very helpful. The American Heart Association link is www.heart.org/eccstudent and has an ACLS Precourse Self-Assessment, supplementary written materials and videos. The code for the online resources is on the ACLS Provider Manual page ii. Basic Dysrhythmias knowledge is required in relation to asystole, ventricular fibrillation, tachycardias in general and bradycardias in general. Student does not need to know the ins and outs of each and every one. For Tachycardias student need to differentiate wide complex (ventricular tachycardia) and narrow complex (supraventricular tachycardia or SVT).

BLS Overview – CAB



Push Hard and Fast – Repeat every 2 minutes.

Anytime there is no pulse or unsure about a pulse - DO COMPRESSIONS!

Elements of good CPR.

- Rate – At least 100/min
- Complete chest recoil
- Compression depth at least 2 inches
- Minimize interruptions (Less than 10 seconds)
- Avoid excessive ventilation
- Switch compressors every two minutes or 5 cycles

If AED doesn't promptly analyze rhythm; COMPRESSIONS!

Tachycardia with a pulse

- If unstable (wide or narrow) go straight to cardioversion.
- If stable with a narrow complex
  - Obtain 12 lead
  - Perform vagal maneuvers
  - Adenosine: 6mg RAPID IVP, followed by 12mg

Stroke

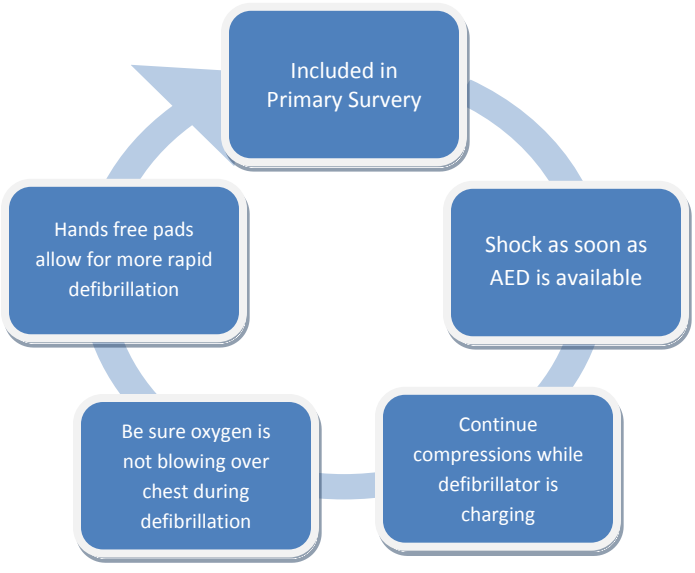
Cincinnati Pre-Hospital Stroke Scale
Facial Droop, Arm Drift, Abnormal Speech

rtPA can be given within 3 hours of symptom onset. Important to transport patient to an appropriate hospital with CT capabilities. If CT is not available divert to the closest hospital (I.e. 15 mins away) with CT.

Acute Coronary Syndromes

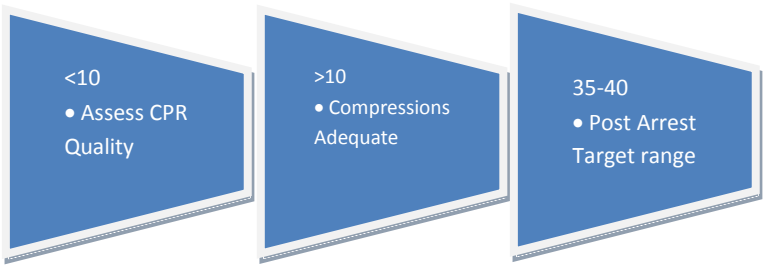
Vital Signs, Oxygen, IV
12 Lead for CP, epigastric pain, or rhythm change

Defibrillation



Waveform Capnography in ACLS (PETCO2)

- Allows for accurate monitoring of CPR
- Most reliable indicator for ET tube placement



Cardiac Arrest

Shockable Rhythms:

- Ventricular Fibrillation (VF)
- Ventricular Tachycardia (VT) without pulse

Biphasic: 120-200J Monophasic: 360J

Non-Shockable Rhythms:

- PEA
- Asystole

- 2 minute cycles of compressions, shocks (if VF/VT), and rhythm checks.
- Epi 1mg every 3-5 minutes (preferred method IV)
- NO MORE ATROPINE for Asystole and PEA
- Ventilations – 30:2 Ratio
- Rescue Breathing – 1 breath every 3-5 sec
- If advanced airway – 8-10 ventilations/minute

Treat Reversible Causes (H's and T's)

Hypoxia or ventilation problems
Hypovolemia
Hypothermia
Hypo/Hyper-kalemia
Hydrogen ion (acidosis)

Tamponade, cardiac
Tension pneumothorax
Toxins – poisons, drugs
Thrombosis – coronary (AMI) – pulmonary (PE)

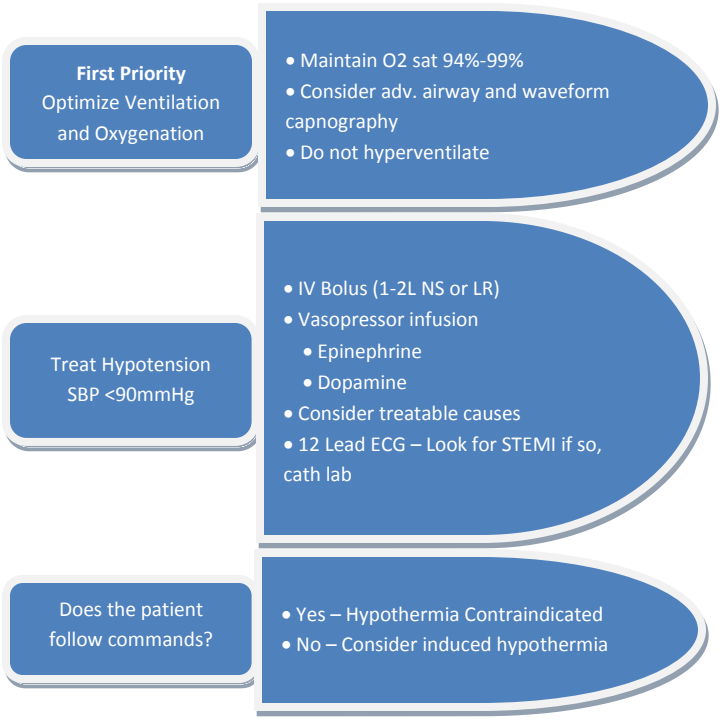
Bradycardia

Need to assess stable versus unstable.
If stable – monitor, observe, and consult.

If unstable. . .

- Atropine 0.5mg IV. Can repeat Q 3-5 minutes.
  Maximum dose = 3mg (Including heart blocks)
- If Atropine ineffective
  - Transcutaneous pacing
  - Dopamine infusion (2-10mcg/kg/min)
  - Epinephrine infusion (2-10mcg/min)

Return of Spontaneous Circulation (ROSC)
Post Resuscitation Care



Points to Ponder

- COMPRESSIONS are very important
- Rigor Mortis is an indicator of termination of efforts.
- Simple airway maneuvers, such as head-tilt, may help.
- The Medical Emergency Teams (MET) can identify and treat pre-arrest conditions.
- Consider terminating efforts after deterioration to asystole and prolonged resuscitation time.