ACLS 2020 GUIDELINES
STUDY GUIDE

Test strategies

What is the question asking – read the question and all available options.

Ask what they are looking for.

There is a difference between what the cause of the problem is OR what algorithm you would follow.

Example:

- What caused the cardiac arrest: Acute Coronary Syndrome
- What algorithm do I follow? Tachycardia or Acute Coronary Syndrome – both are algorithms
  - What is the most pressing problem?
    - Cardiac arrest is a higher priority over treatment for ACS

CPR reminders:

- You find an unresponsive patient – remember your basics!
  - Check for breathing and pulse
- High-quality CPR includes:
  - Cyles of chest compression at least two inches/5 cm
  - Rate 100 – 120/minute
  - Full chest recoil
  - 2-minute cycles of 30 compressions/2 ventilations UNLESS the patient is intubated, then continuous compressions for 2 minutes and ventilate every 10 seconds.
  - End-tidal CO2/PETCO2/Waveform capnography can monitor CPR quality
    - Should be > 10 – less than 10 indicates inadequate CPR
  - Pulse check should be **no longer than 5 – 10 seconds**
  - **Chest compression fraction** – the amount of time compressions are done in a cardiac arrest – to improve – charge the defibrillator 15 seconds before the compressors switch so that the patient can be shocked during the 5-10 break between 2-minute cycles
  - **CPR Coach** – monitors CPR to ensure high-quality CPR

Use of Electricity

Stable patients are treated with medications – do not electicute your patient who is stable without expert consultation and careful consideration

Unstable patients are treated with electricity

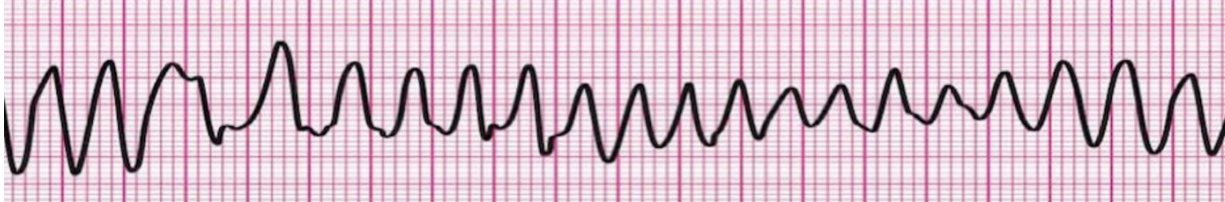Live patients (have a pulse) are cardioverted

Dead patients (no pulse) are defibrillated

The next step after a patient is defibrillated – resume CPR right away, beginning with chest compressions.

Airway, breathing and ventilation
- Agonal gasps are a sign of cardiac arrest – CHECK PULSE AND START CPR
- End-tidal CO2/waveform capnography/PETCO2 is the best way to confirm endotracheal airway placement
- Oropharyngeal airway placement – measure from the corner of the mouth to the angle of the mandible
- Pulse-oximetry reading <94% - apply O2 via nasal cannula
- Ventilation – squeeze ambu bask once every 6 seconds
- **Excessive ventilation** (being too forceful with ambu bag) increases intrathoracic pressure. This **decreases cardiac output** and decreases chance of survival

Rhythms

Ventricular Fibrillation	1. See Tachycardia algorithm 2. Immediately CHECK PULSE AND START CPR 3. Defibrillate ASAP 4. 1st medication is Epinephrine 1mg every 4 minutes 5. 1st dose of Amiodarone 300 mg OR Lidocaine 1 – 1.5 mg/kg 6. 2nd dose of amiodarone 150 mg

Supraventricular Tachycardia (SVT) Narorw complex tachycardia	Follow the tachycardia algorithm Stable patients get medications and remember A-B-C • Adenosine 6mg followed by 12 mg • Beta-blockers • Calcium Channel blockers Unstable patients – electricity – Cardioversion

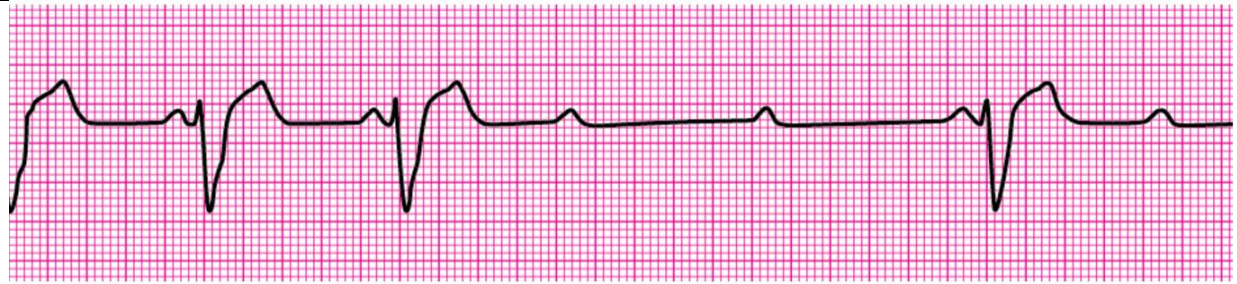| **Third-degree Heart Block**	

Monomorphic Ventricular Tachycardia * awake and responsive = alive = cardiovert if unstable Pulseless = dead – defibrillate/CPR/cardiac arrest algorythm	Tachycardia Algorithm Stable : Medications Unstable with pulse – cardioversion Unstable NO pulse – begin cardiac arrest algorithm

2nd degree Type I **Wenkeback**	Stable or unstable Stable – expert consultation and mindful watching Unstable - Follow bradycardia algorithm

| **NO PULSE – PEA** Make sure you read the scenario – if no pulse and NOT VTach/Vfib then the rhythm is PEA	CPR Epinephrine 1mg Q 4 minutes Hs&Ts

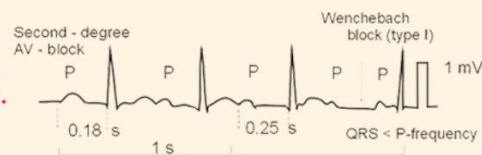| 2nd Degree Type II/Mobitz II	Stable or unstable? Stable – mindful watching Unstable – Bradycardia algorithm Atropine 1mg Transcutaneous pacing

The Heart Block Poem
by the Princeton Surgical Group & nurseslabs

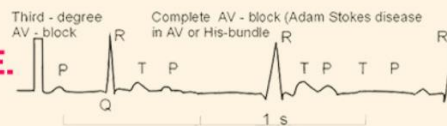If the **R** is far from **P**,
then you have a **FIRST DEGREE**.
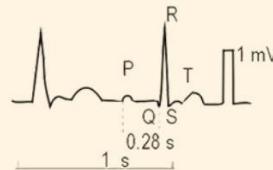
Longer, longer, longer, drop!
Then you have a **WENKEBACH**.

If some **P**s don't get through,
then you have **MOBITZ II**.

If **P**s and **Q**s don't agree,
then you have a **THIRD DEGREE**.

ACUTE CORONARY SYNDROME
- Suspect in adults who have chest pain.
- Should be transported by EMS to a coronary reperfusion capable medical center.
- ECG is a priority in the stable patient
- Administer Aspirin 160-325 mg if no contraindications
- For STEMI patients – door to balloon time goal is 90 minutes

STROKE
- EMS providing pre-hospital notification of suspected stroke improves outcomes
- Head CT within 20 minutes
- Prepare to administer thrombolytic if normal Head CT

Post-Cardiac Arrest Care
- Minimum B/P in post-arrest period is 90
- After the patient has a return of spontaneous circulation (ROSC), the team may consider targeted temperature management/therapeutic hypothermia
- Consider for the patient unable to respond after successful resuscitation
- The patient is cooled to 32 – 36 degrees for 24 hours
- Requires intubation and critical care consult
- Not appropriate for all – but the team should consider this intervention

Rapid response teams or Medical Emergency Teams
The purpose is to improve outcomes to prevent early clinical deterioration before it happens.

Teamwork & Dynamics
- Team leader should clearly delegate tasks to decrease inefficiencies
- The team leader has a lot on their mind. If you cannot perform a skill or task outside your scope of practice, it is **your responsibility** to notify the leader and **ask for a new role.**
- **Closed-loop communication –**
  - Team members repeat back instructions in a clear and loud manner to ensure the instruction was heard correctly
    - Team leader: Please give Epinephrine 1mg
      - Team member repeat back – I will draw up Epinephrine 1 mg
        - I am administering Epinephrine 1mg
  - Even if the team member is doubtful about the order – the exact wording of the order should be repeated back to the team leader to ensure clear and accurate communication. The communication is aided by reinforcing what was conveyed.
    - Team leader: Please give Epinephrine 10 mg
      - Team member repeat back – I have an order to draw up and give Epinephrine 10 mg – is that correct?
      - The team member may remind the team leader that the algorithm calls for Epinephrine 1mg
      - Team members should correct mistakes in real time