An Inter-Professional Education (IPE) Approach to Resuscitation in the COVID-19 Era
Facilitator Guide: Key Teaching/De-briefing Suggestions

This document includes key teaching points based on student learning outcomes and are suggestions for faculty to follow when discussing the 2 resuscitation videos:

Objective 1: Identify steps and actions needed to administer CPR to a patient in a code situation.
Facilitator Guide: Key Teaching Points to Emphasize/De-briefing Suggestions:

Inside Patient Room

- Calling for help – requesting staff:
  - Hit bedside emergency bell for assistance
  - Initiating compressions within 10 seconds
  - Assign staff to call emergency number to deploy code team
  - Assign staff to bring AED, crash cart, and step stool
    - Delegating compressions to a responding team member (relieving primary nurse ASAP)
    - Providing quality adjuncts when performing CPR, to include:
  - Use of backboard
  - Use of stepstool
  - Ideal bed placement, such as lowering the height of bed, putting bedrails down, placing head of bed flat
  - Change compressors every 2 minutes to avoid compressor fatigue
  - Switch compressors when AED is analyzing
  - 100% non-rebreather –
    - Rationale- this is to allow for passive oxygenation without aerosolizating possible virus, etc
  - Bag-valve-mask with viral HME filter attached to oxygen flowmeter with flowrate of 10-15L **after ALL staff are in proper PPE**
    - Viral HME filter is used to prevent aerosolization of sputum
  - Defibrillator (on tower/cart)
    - Defibrillator should come to the bedside and placed across from compressor
      - If defibrillator has quality metrics built in – this will allow the compressors the ability to see how he/she is doing and self-correct for optimal compressions
    - Defibrillator should not be placed on the bed during emergency event
  - ETCO2 –
    - Colorimetric ETCO2 - Can be used as a quick confirmation tool to confirm airway placement
    - Continuous ETCO2 – is used to assist with the quality of CPR
      - Normal ETCO2 = 35-45
      - For coding patient:
        - ✓ <10 mmHg - switch compressors; poor prognosis
        - ✓ >20 - 25 mmHg – goal # while CPR is being performed
        - ✓ >30 mmHg - assess a pulse at next 2 min compressor switch
- Minimizing interruptions in compressions
- Maximizing chest compression fraction
- Initiating early use of an AED – defibrillating within 180 seconds if appropriate
  - Place AED pads appropriately
  - Place backboard under patient
  - Connect pads to defibrillator
  - Turn on AED
  - Follow all AED prompts
  - State “resume compressions” after shock is delivered

- Ensuring a team member initiates ventilation
  - Passive oxygenation with non-rebreather mask is preferred until staff protected in proper PPE
  - **All members in room should be in full PPE prior to ventilating with BVM (bag-valve-mask) with 10-15L oxygen flow**

Outside Patient Room

- Code cart
- Gatekeeper
- Pharmacist
- Code Team RN
- Medication box
- Extra staff to switch out if needed
- PPE supplies outside room

Objective 2: State the 3 key components of high-quality CPR.
Facilitator Guide: Key Teaching Points to Emphasize/De-briefing Suggestions:

- Effective chest compressions (100-120 compressions/minute with adequate depth of 2-2.4 inches and full recoil, utilizing backboard and step stool).

Objective 3: Verbalize epinephrine dose (1 mg) and periodically (every 3-5 minutes) in which this medication should be administered in non-shockable rhythms/shockable rhythms.
Facilitator Guide: Key Teaching Points to Emphasize/De-briefing Suggestions:

1) **Shockable rhythm:**
   - First dose epinephrine dose (1 mg) should be ordered and administered *after* the second shock/defibrillation and then repeat every 3-5 minutes (best practice to do roughly every 4 minutes so that it occurs with compressors switching)
2) **Non-shockable rhythm:**
   - First dose epinephrine dose (1 mg) should be ordered and administered as soon as possible to assure that it is given within the first 5 minutes of the arrest and then repeat every 3-5 minutes (best practice to do roughly every 4 minutes so that it occurs with compressors switching)

Objective 4: Verbalize reversible causes of Pulseless Electrical Activity (PEA): (hypovolemia, hypoxia, hydrogen ion, hypokalemia/hyperkalemia, hypothermia, tension pneumothorax, cardiac tamponade, toxins, pulmonary thrombosis, coronary thrombosis, and hypoglycemia) and their treatments.

Objective 5:
List the proper Personal Protective Equipment (PPE) needed for patient care in a covid-19 era setting (May vary from institution and supply chain availability).
Facilitator Guide: Key Teaching Points to Emphasize/De-briefing Suggestions:

- Gatekeeper – what did the gatekeeper need to assure that staff had on before they walked in the room
  - Head gear
    - RT and Anes = PAPR
    - Others N95/Draeger with face shield
  - Gown
  - Gloves

Objective 6: Describe the role of a CPR Coach in the resuscitation.
Facilitator Guide: Key Teaching Points to Emphasize/De-briefing Suggestions:

- Having a dedicated staff member to lead local team in CPR efforts to assure quality CPR is being performed.
- Work in tandem with the Code Team Leader
- Coach will continue to give guidance to compressors to assure they are meeting the AHA metrics/standards
- Allow Code Team Leader to think through possible causes and direct plan of care
- Responds and work together as a high-performance team in a simulated emergency event.
- Effective chest compressions (100-120 compressions/minute with adequate depth of 2-2.4 inches and full recoil, utilizing backboard and step stool).
- Apply AED and defibrillate shockable rhythm within 180 seconds of pulselessness
- Organizing team members and assign appropriate roles
- Demonstrate closed loop communication as members or leaders of a code team
- Works within the appropriate algorithm – shockable vs non-shockable

QCPR Coach Checklist

High quality CPR performed by monitoring:

- ❑ **CPR started within 10 sec**
- ❑ **Depth 2 - 2.4 in**
- ❑ **Rate = 100 - 120 bpm**
- ❑ **Assure that recoil is occurring with compressions**
- ❑ Staff rotating CPR every 2 min
  - ❑ At least 2 - 3 staff in line to be compressors
  - ❑ Using step stool while compressing
- ❑ Back board under pt's back (if on soft surfaces)
- ❑ Pillow is out from under pt's head and bed flat

Defibrillator

- ❑ Assure the pads are placed correctly and puck is over the lower half of the sternum (JHH/JHU device specific)
- ❑ If defibrillator has feedback matrix, it should face compressor and angled slightly towards team leader
- ❑ Monitor:
  - ❑ QCPR Coach will coach the compressor(s) based on feedback from the feedback matrix
  - ❑ "Clear" the patient prior to shock
  - ❑ Coordinate compressor switches on and off the chest
    - ❑ Pause only during analyzing & delivering shock (<10 sec off chest)
    - ❑ Compression continued during charging
  - ❑ Shock if shockable rhythm (**pulseless VT/VF**). Otherwise give Epi for PEA/asystole arrest
- ❑ **Defib w/in 180 sec for pulseless VT/VF**

Documentation

- ❑ Assure that there is a nurse **documenting** the event the whole time
  - ❑ *This person can help keep time of last drugs, shock, etc if directed to do so*

Airway

- ❑ Assures airway is maintained
  - ❑ BVM (bag valve mask): 30 compressions to 2 breaths
  - ❑ ETT (endotracheal tube): 1 breath every 6 sec
- ❑ Assures that continuous ETCO2 detector being used (BVM or ETT)
- ❑ **ETCO2** (continuous wave form capnography)
  - ❑ <10 mmHg - switch compressors; poor prognosis
  - ❑ **≥20 - 25 mmHg – goal # while CPR is being done**
  - ❑ >30 mmHg - assess a pulse at next 2 min compressor switch

Medications

- ❑ **1st dose of Epi ≤ 5 min**
  - ❑ **PEA** give immediately with recognition
  - ❑ pulseless **VT/VF** give after 2nd defibrillation
  - ❑ Epi dosing:
    - ❑ Code: (1:10000) IV/IO 1mg

Additional Resources for Educators:

- European Resuscitation Council COVID-19 Guidelines – 24 April 2020
  - Minimum Airborne
  - Minimum Droplet
- AHA Interim Guidance for Basic and Advanced Live Support in Adults, Children guidelines…
  - 10.1161/CIRCULATIONAHA.120.047463- 21 April 2020