II.3.A CARDIOPULMONARY ARREST RESUSCITATION

ADULT & PEDIATRIC

ELEMENTS OF EFFECTIVE RESUSCITATION AND TEAM DYNAMICS

Four + Rescuers/Compression & Ventilation Leader/Position 4 (P4)
Always outside CPR “triangle”

- Monitor time intervals
  - Calls for compressor change every 60 seconds
  - Calls for rhythm analysis every 2 minutes
- Monitor quality of CPR and use of metronome at 120 beats per min
- Assume manual defibrillator in “paddled” mode
- Monitor for use of proper equipment/adjuncts (eg. ResQPod)
- Gathers concise history from family/bystanders
- Keeps resuscitation area quiet so team members can hear
- Avoids direct patient care to maintain supervisory duties if greater than four rescuers throughout EMS resuscitation.

- Directs “staging” of personnel beyond six rescuers away from immediate resuscitation area to prevent crowding
- Assumes duties of P5/P6 if limited to four rescuers throughout EMS resuscitation (if paramedic) and positions self in P5 or P6 position.

Three + Rescuers/ Airway/Position 3 (P3)
Always at patient’s head

- Airway management per protocol(s)
  - o for BVM ventilations, applies mask seal with both hands while P1 and P2 alternate bag squeezing during their respective chest compression off cycles. Squeezes bag only when P1 and P2 busy with other tasks.
  - o assist intermediate/paramedic during intubation as needed (if not intermediate or paramedic)
  - o Avoid compression interruptions for airway procedures (eg. King Airway or intubation)

Two + Rescuers/Circulation 2/Position 2 (P2)
Always on patient’s left

- If more than two rescuers:
  - o apply AED/manual defibrillator in first minute while P1 compressing
  - o if good bystander CPR for arrest or estimated arrest time less than or = 4 mins, charge manual defib (when available) last 15 seconds of P1 compressions & prepare to deliver compressions after rhythm analysis
  - o analyze rhythm (by AED or paramedic)
  - o start chest compressions immediately if no defib delivered or immediately after defib (if indicated)
  - o continuous chest compressions 1 min
- Adult/Pediatric: 120/min
  - o if no/poor bystander CPR for arrest or estimated arrest time over 4 mins, alternate compressions with P1
  - o start compression metronome at 120 beats per min as soon as possible when P1 compressing (priority goes to AED/manual defibrillator attachment)
  - o if BVM ventilations by P3 & when able, squeeze bag with ResQPod light (10/min rate) in off compression cycle (while P1 compressing) as P3 maintains mask seal

- If two rescuers:
  - o apply AED/manual defibrillator in first minute while P1 compressing
  - o if good bystander CPR for arrest or estimated arrest time less than or = 4 mins, charge manual defib (when available) last 15 seconds of P1 compressions & prepare to deliver compressions after rhythm analysis
  - o analyze rhythm (by AED or paramedic)
  - o start chest compressions immediately if no defib delivered or immediately after defib (if indicated)
  - o continuous chest compressions 1 min
- Adult/Pediatric: 120/min
  - o if no/poor bystander CPR for arrest or estimated arrest time over 4 mins, manual defibs
  - o start compression metronome at 120 beats per min as soon as possible when P1 compressing (priority goes to AED/manual defibrillator attachment)

Single Rescuer/Circulation 1/Position 1 (P1)
Always on patient’s right

- If more than two rescuers:
  - o continuous chest compressions 1 min
    - Adult/Pediatric: 120/min
  - o alternate compressions with P2
  - o charge manual defib (when available) last 15 seconds of P2 compressions
  - o analyze rhythm (by AED or paramedic)
  - o if AED is used and defib indicated, resume chest compressions while AED is charging. Clear for defib. Resume compressions immediately after P2 delivers AED defib or paramedic delivers manual defib (if paramedic present & defib indicated)
  - o if BVM ventilations by P3 & when able, squeeze bag with ResQPod light (10/min rate) in off compression cycle (while P2 compressing) as P3 maintains mask seal

- If two rescuers:
  - o continuous chest compressions 1 min
    - Adult/Pediatric: 120/min
  - o add passive oxygenation with NRB O2 in second minute when P2 compressing (passive oxygenation limited to first 6 mins of EMS resuscitation)
  - o pediatric 2 ventilations per 15 compressions by P2 until additional help available to place advanced airway
  - o alternate compressions with P2
  - o charge manual defib (when available) last 15 seconds of P2 compressions
  - o if AED is used and defib indicated, resume chest compressions while AED is charging. Clear for defib. Resume compressions immediately after P2 delivers AED defib or paramedic delivers manual defib (if paramedic present & defib indicated)

- If alone and arrest witnessed:
  - o apply AED/manual defibrillator
  - o analyze rhythm (by AED or paramedic)
  - o defib if indicated (by AED or paramedic) with compressions during AED or manual defib charging. Clear for defib.
  - o call for additional help
  - o continuous chest compressions 2 mins
  - Adult/Pediatric: 120/min
  - o apply AED/manual defibrillator
  - o analyze rhythm (by AED or paramedic)
  - o defib if indicated (by AED or paramedic) with compressions during AED or manual defib charging. Clear for defib.

- If alone and arrest un witnessed:
  - o call for additional help
  - o continuous chest compressions 2 mins
  - Adult/Pediatric: 120/min
  - o apply AED/manual defibrillator
  - o analyze rhythm (by AED or paramedic)
  - o defib if indicated (by AED or paramedic) with compressions during AED or manual defib charging. Clear for defib.

- Monitor compressions and analyze rhythm by AED or paramedic every 2 minutes (with defib if indicated as above) until additional help arrives

Five + Rescuers/Vascular and Medication/Position 5 (P5)
Paramedic
Always outside CPR “triangle” toward lower 1/2 of patient

- Initiates IV/IO access
- Administers medications per protocol(s) in consult with P6
- Delivers manual defib (when indicated) if both P1 and P2 non-paramedic in this situation monitors manual defibs moved from patient upper left to P5 location

Six + Rescuers/Resuscitation Leader/Position 6 (P6)
Paramedic
Always outside CPR “triangle” at lower 1/2 of patient

- Maintains overall awareness of resuscitation dynamics
- “Busiest mental activity” position on team dictates little to no physical activity
- Interfaces with P1-5 as situation dictates
- Prioritizes communication with P1-3 through P4
- Assesses for etiologies of cardiac arrest
- Determines if termination of resuscitation appropriate
  - o consult OLMCP when indicated by protocol