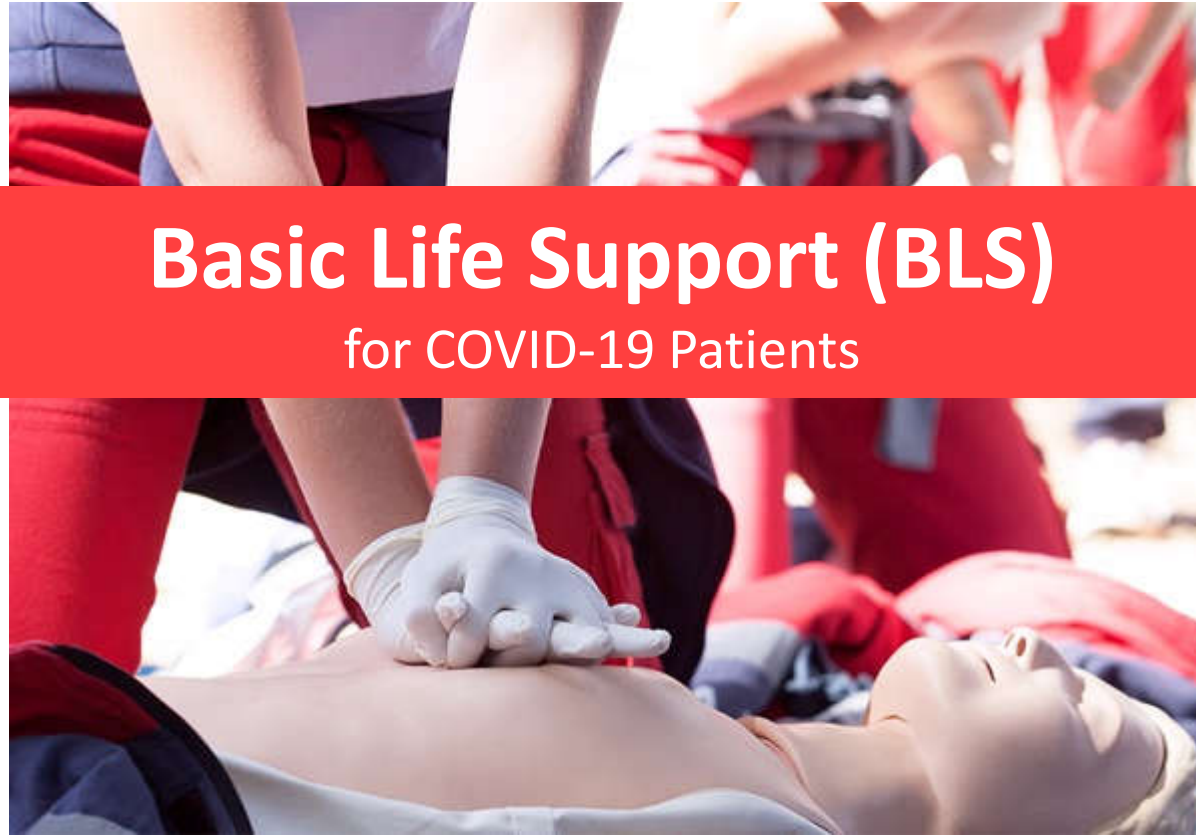


In the name of God

Basic Life Support (BLS)

for COVID-19 Patients



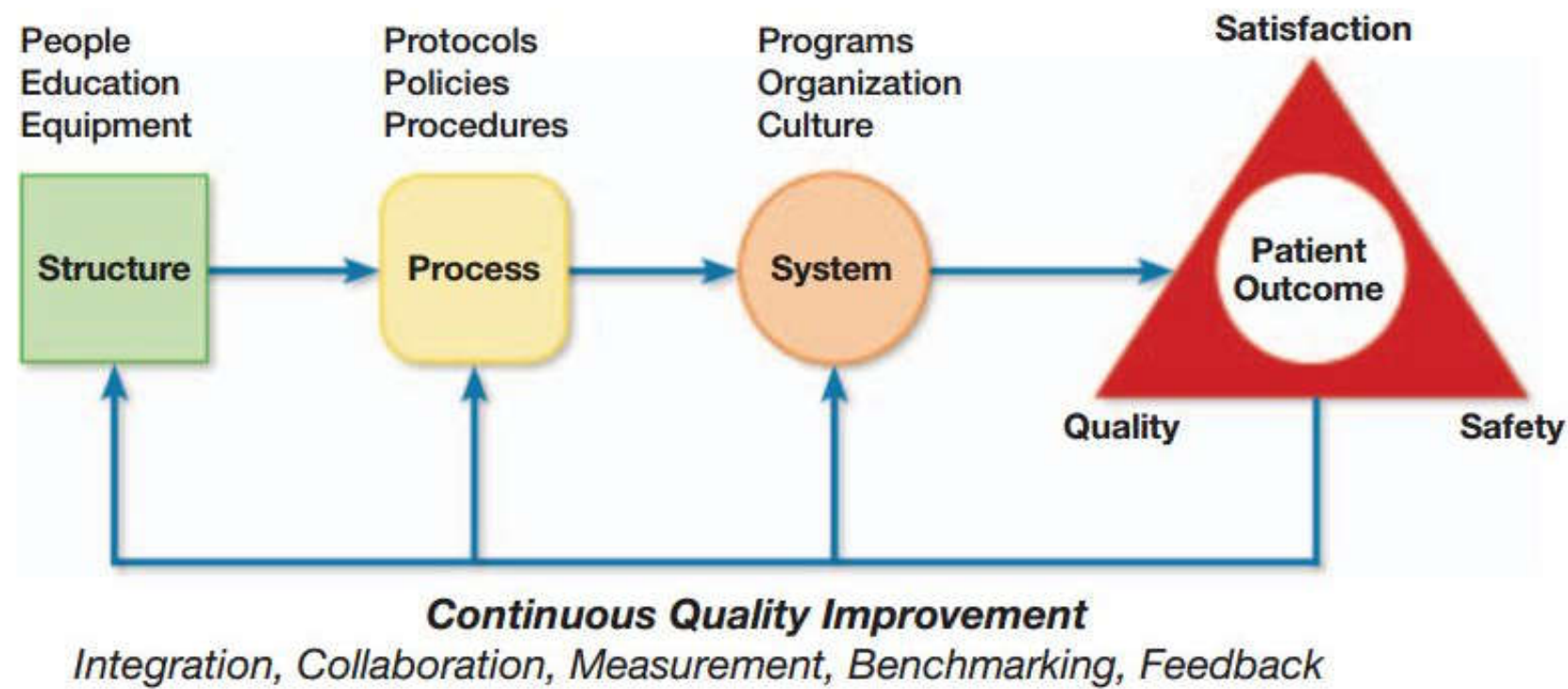
Presented by:
Morteza Ghaderi
MSN - EMS Educator



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Taxonomy of Systems of Care: SPSO

Structure Process System Outcome



Coronavirus Cases:

22,113,410

[view by country](#)

Deaths:

778,537

Recovered:

14,848,583

Last updated: August 18, 2020, 15:09 GMT



Coronavirus Cases:

347,835

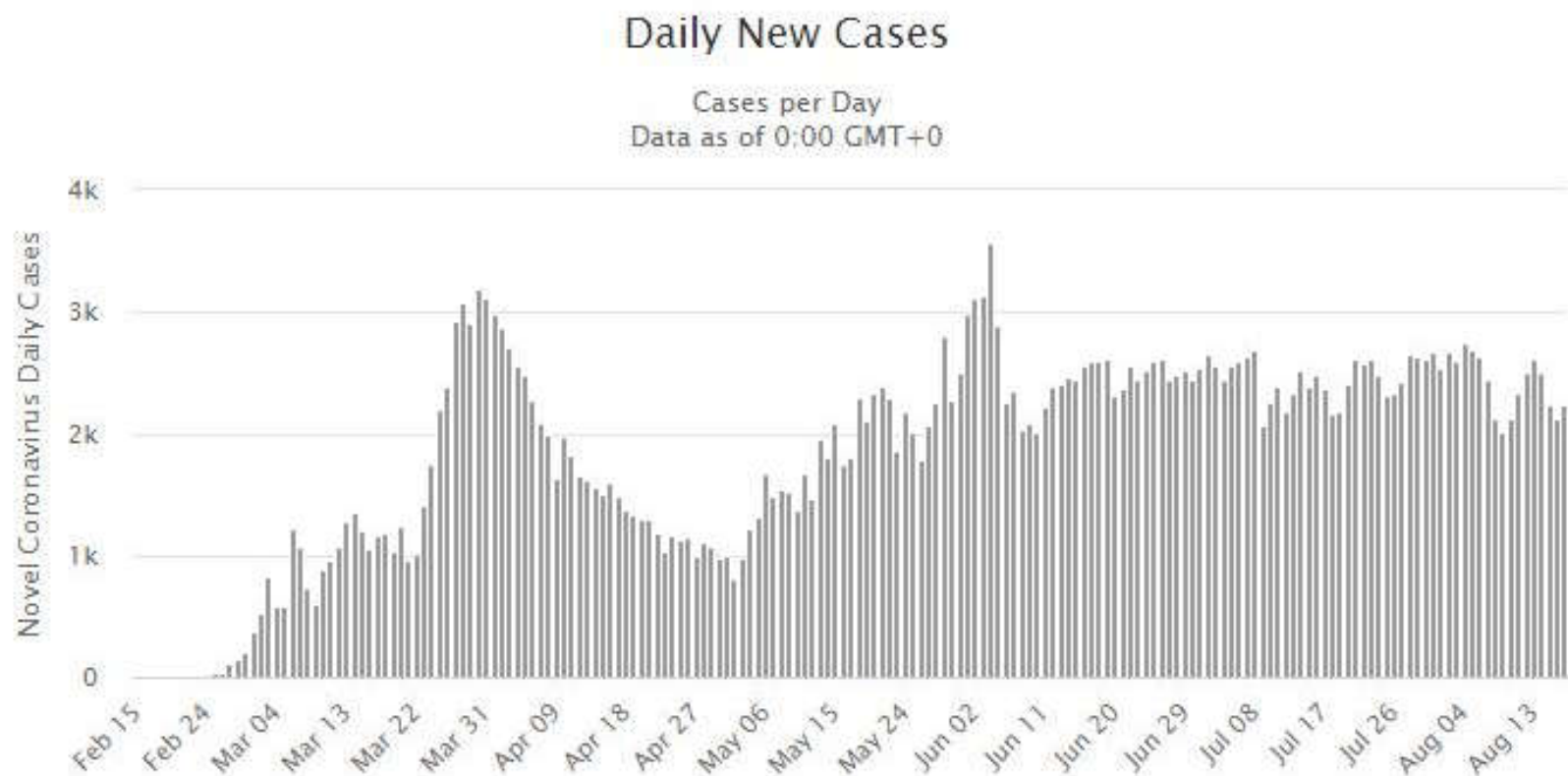
Deaths:

19,972

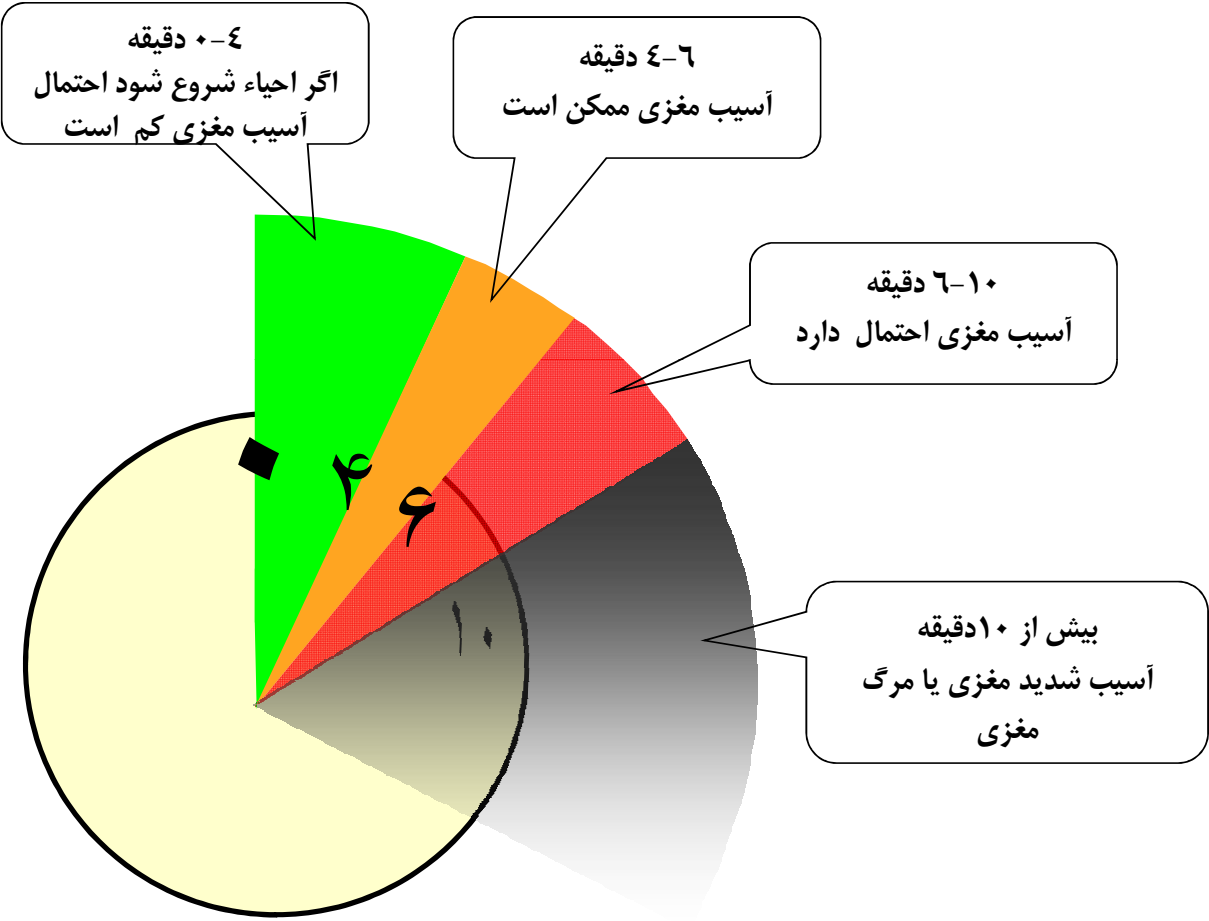
Recovered:

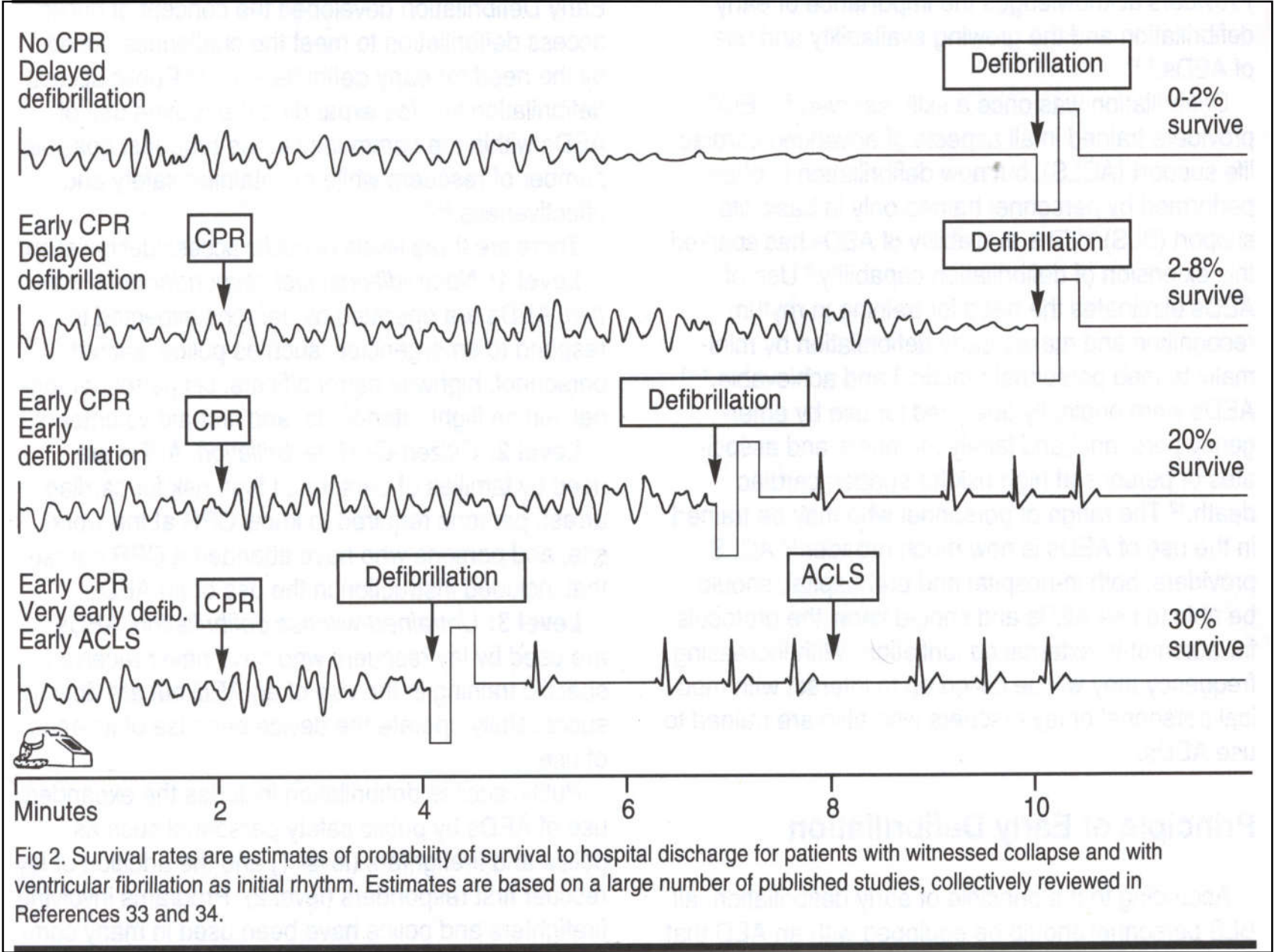
300,881

Daily New Cases in Iran



شانس زنده ماندن به ازاء هر دقیقه عدم درمان به شدت کاهش می یابد



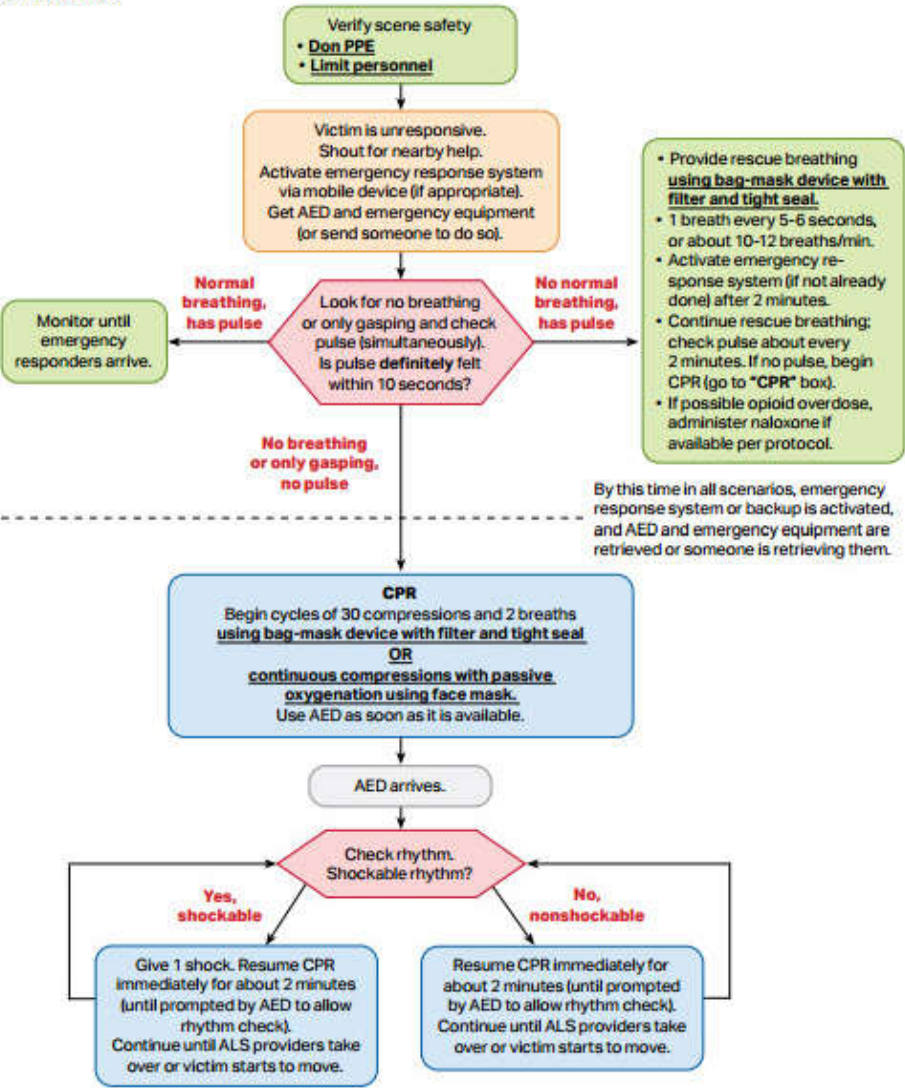


BLS Healthcare Provider Adult Cardiac Arrest Algorithm for Suspected or Confirmed COVID-19 Patients



**BLS Healthcare Provider Adult Cardiac Arrest Algorithm
for Suspected or Confirmed COVID-19 Patients**

Updated April 2020

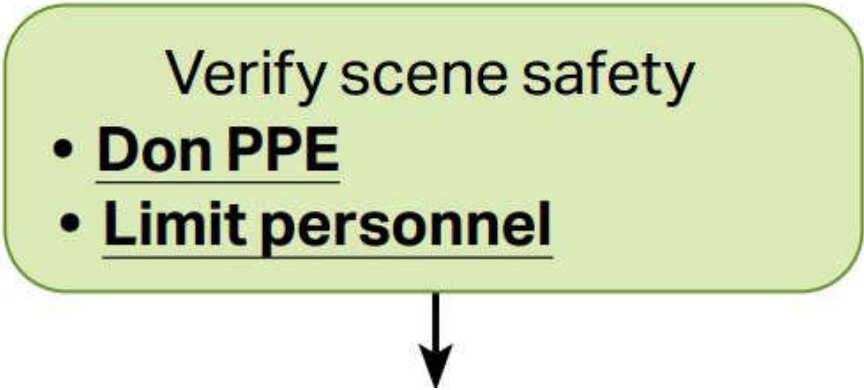


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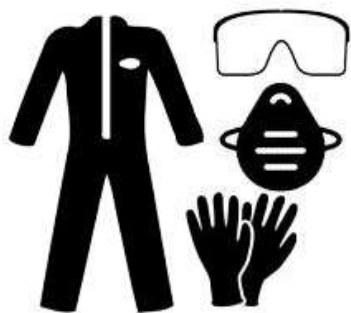


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BLS Healthcare Provider Adult Cardiac Arrest Algorithm for Suspected or Confirmed COVID-19 Patients



Reduce Provider Exposure



Properly don personal protective equipment before entering the scene.



Limit the number of personnel inside the resuscitation room.

Mechanisms of transmission of SARS-CoV-2

The main mechanism of disease transmission of SARS-CoV-2 is by respiratory secretions either directly from the patient or by touching contaminated surfaces. Respiratory secretions are called either droplets (> 5–10 microns in diameter) or airborne particles (< 5 microns). Droplets fall onto surfaces within 1–2 metres of the patient’s respiratory tract while airborne particles can remain suspended in the air for prolonged periods.⁴



Personal protective equipment (PPE)

The minimum **droplet-precaution** personal protective equipment (PPE) comprises:

- Gloves
- Short-sleeved apron
- Fluid-resistant surgical mask
- Eye and face protection (fluid-resistant surgical mask with integrated visor or full-face shield/visor or polycarbonate safety glasses or equivalent).

The minimum **airborne-precaution** PPE comprises:

- Gloves
- Long-sleeved gown
- Filtering facepiece 3 (FFP3) or N99 mask/respirator (FFP2 or N95 if FFP3 not available)*
- Eye and face protection (full-face shield/visor or polycarbonate safety glasses or equivalent). Alternatively, powered air purifying respirators (PAPRs) with hoods may be used.



Filtering Facepiece Respirator (FFR)



- Disposable
- Covers the nose and mouth
- Filters out particles such as dust, mist, and fumes
- Select from N, R, P series and 95, 99, 100 efficiency level
- Does NOT provide protection against gases and vapors
- Fit testing required

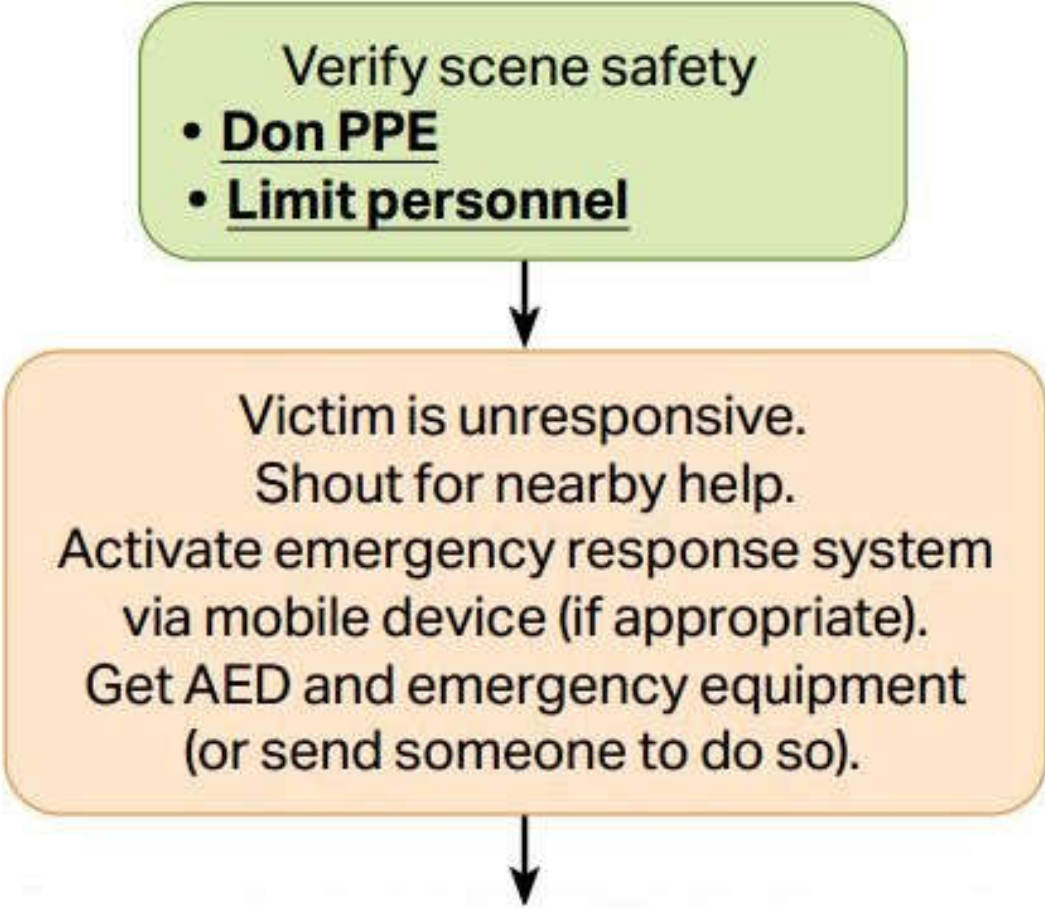


Powered Air-Purifying Respirator (PAPR)

- Reusable components and replaceable filters or cartridges
- Can be used to protect against gases, vapors, or particles, if equipped with the appropriate cartridge, canister, or filter
- Battery-powered with blower that pulls air through attached filters or cartridges
- Provides eye protection
- Low breathing resistance
- Loose-fitting PAPR does NOT require fit testing and can be used with facial hair
- Tight-fitting PAPR requires fit testing

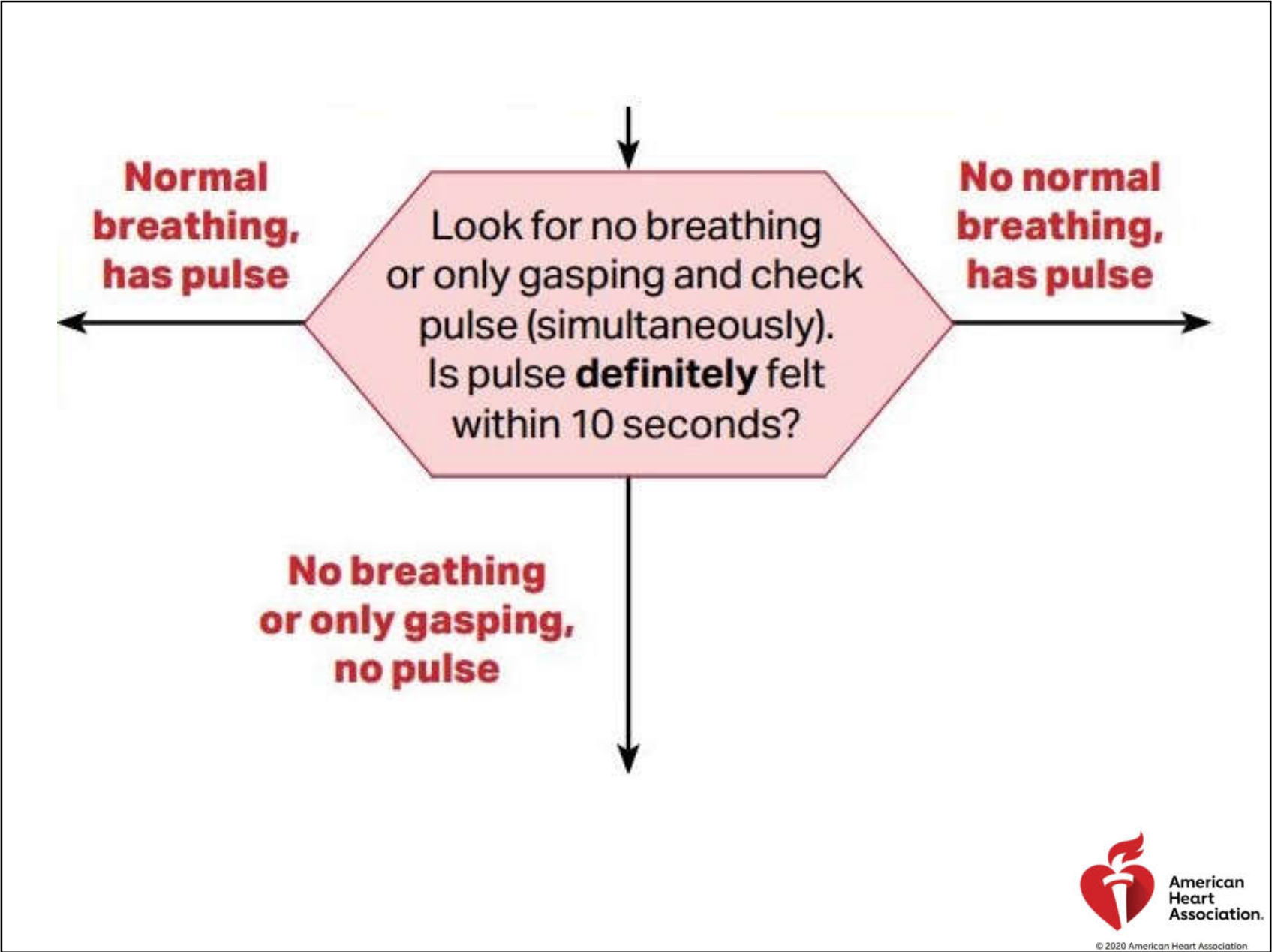


BLS Healthcare Provider Adult Cardiac Arrest Algorithm for Suspected or Confirmed COVID-19 Patients



CHECK RESPONSE & SHOUT FOR HELP



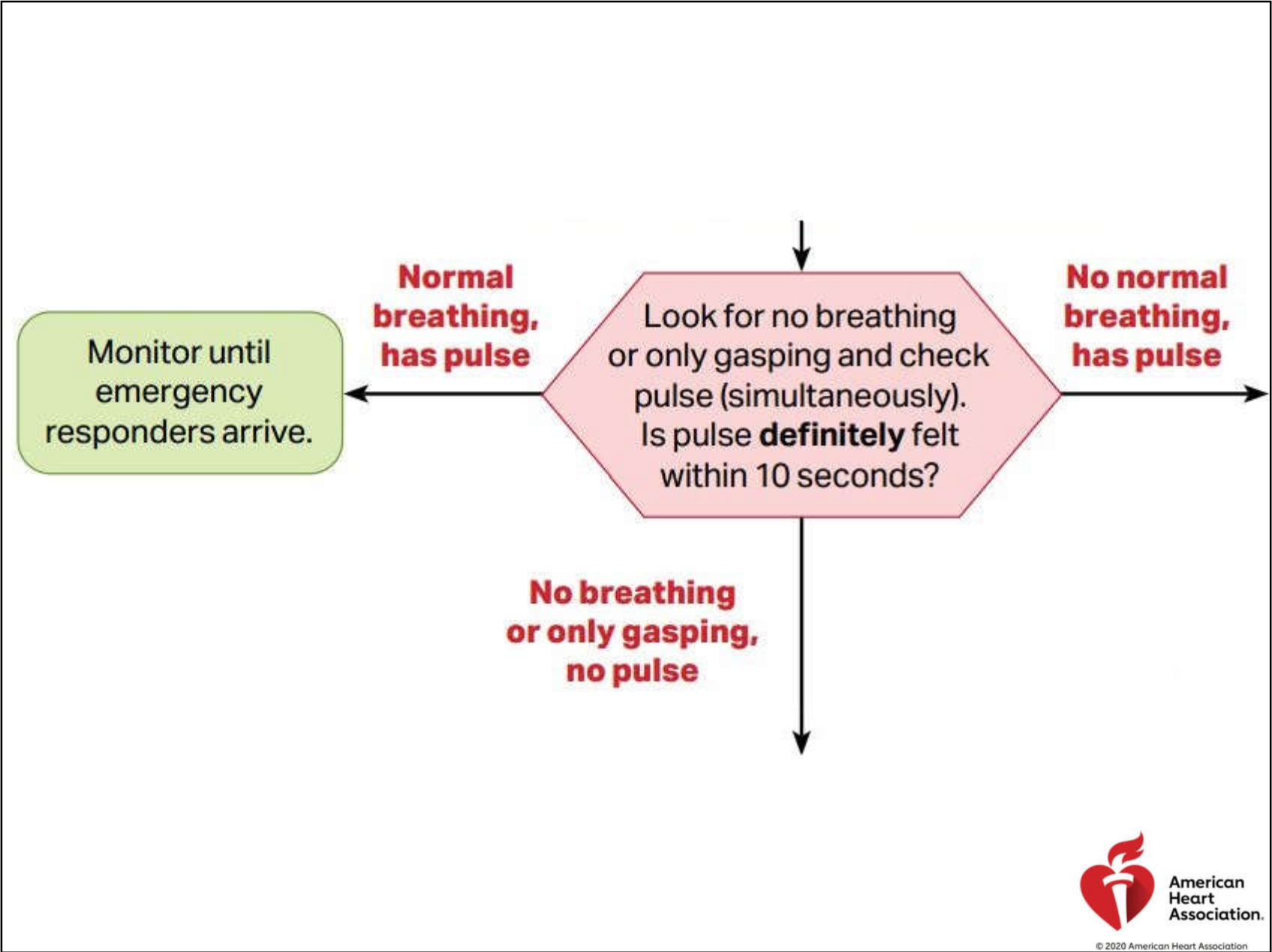


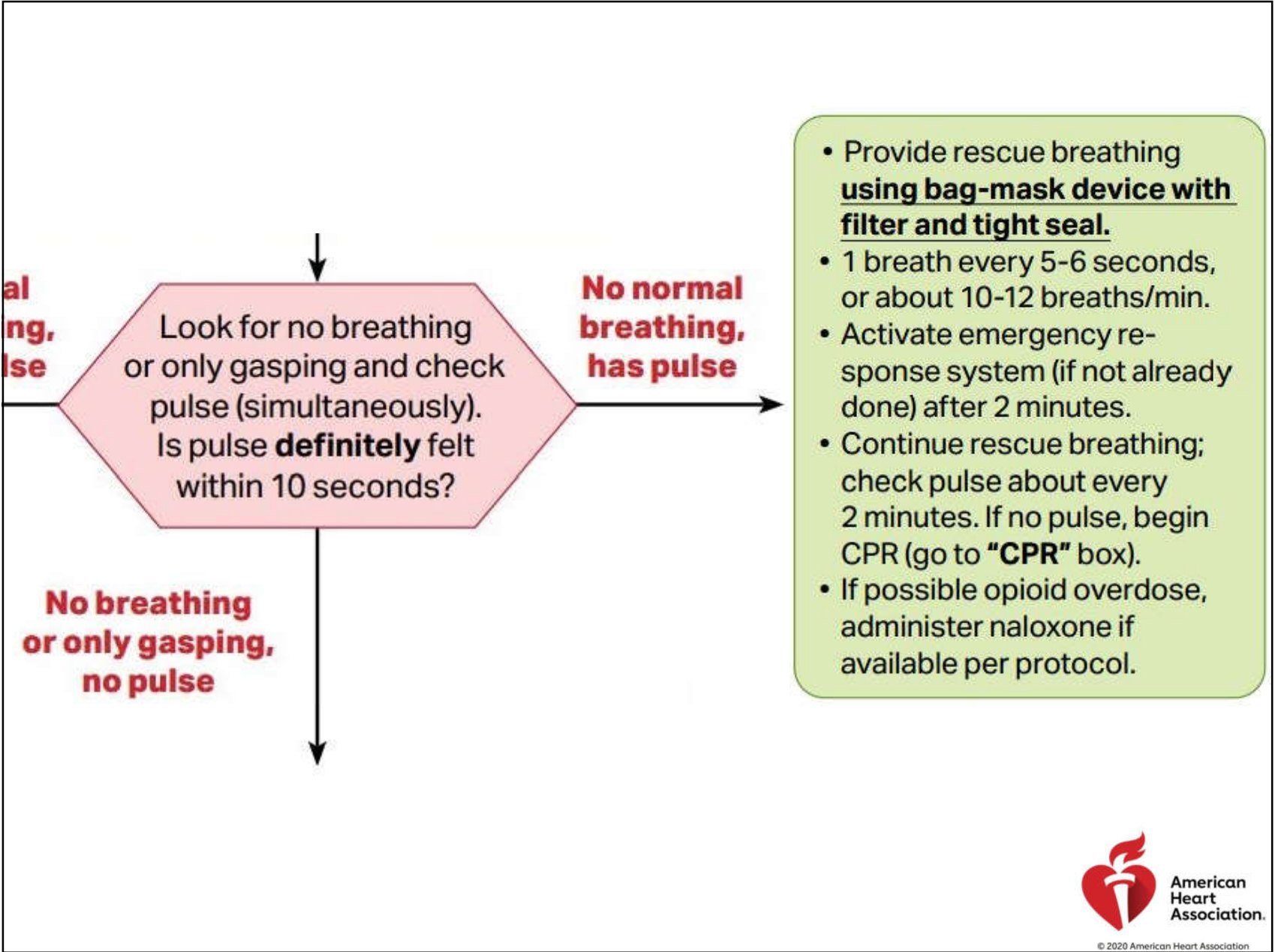
Check pulse

Only for healthcare provider

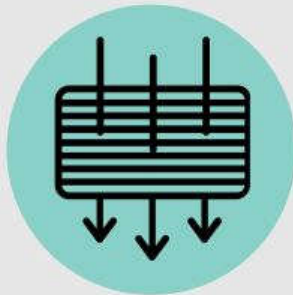
Feel within **10 sec**



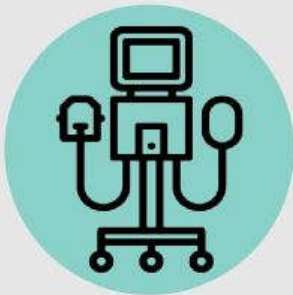




Prioritize Oxygenation and Ventilation Strategies That Minimize Aerosolization



Use a HEPA filter for all ventilation.



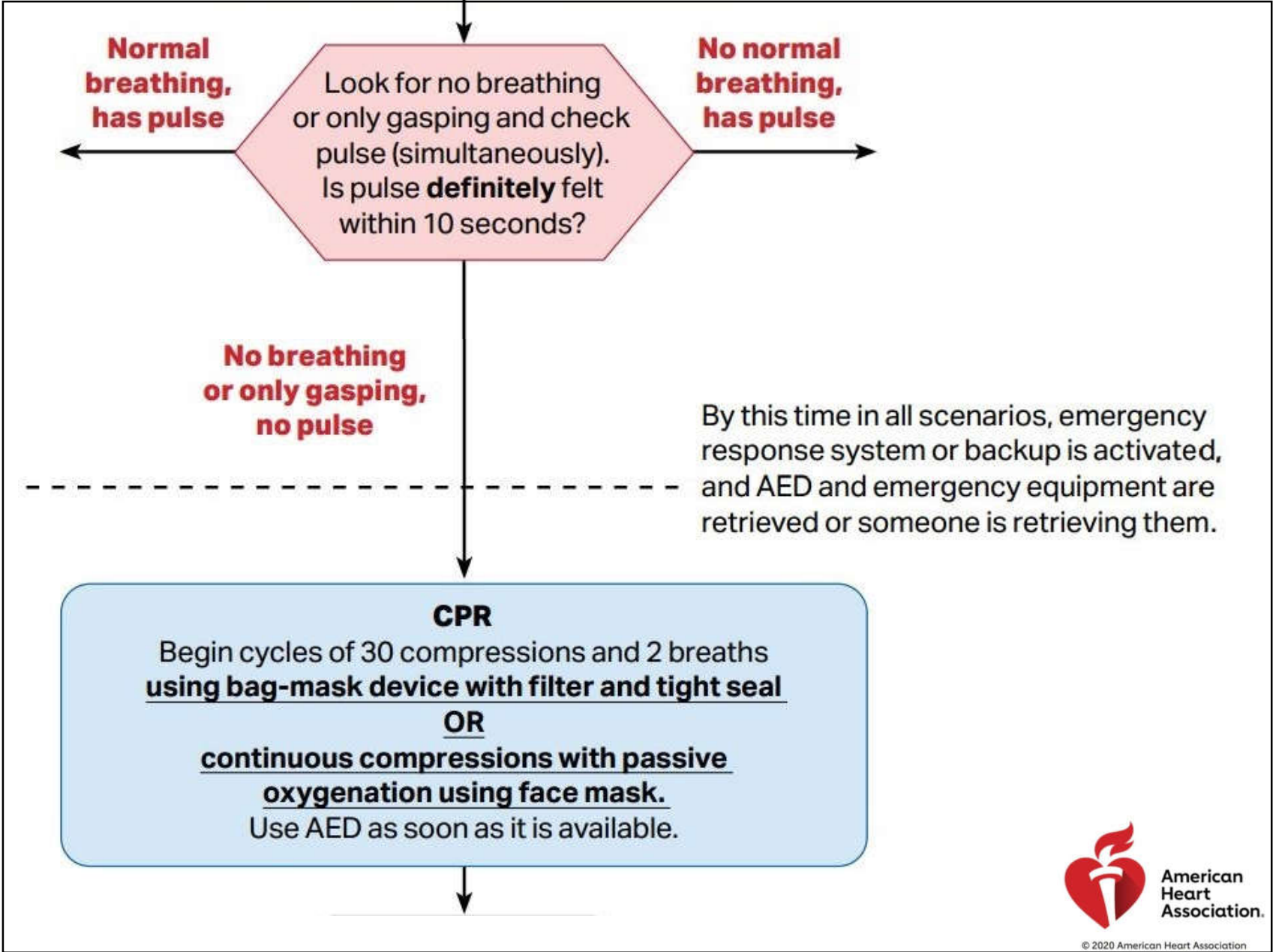
Intubate early with a cuffed tube and connect to a mechanical ventilator, if available.



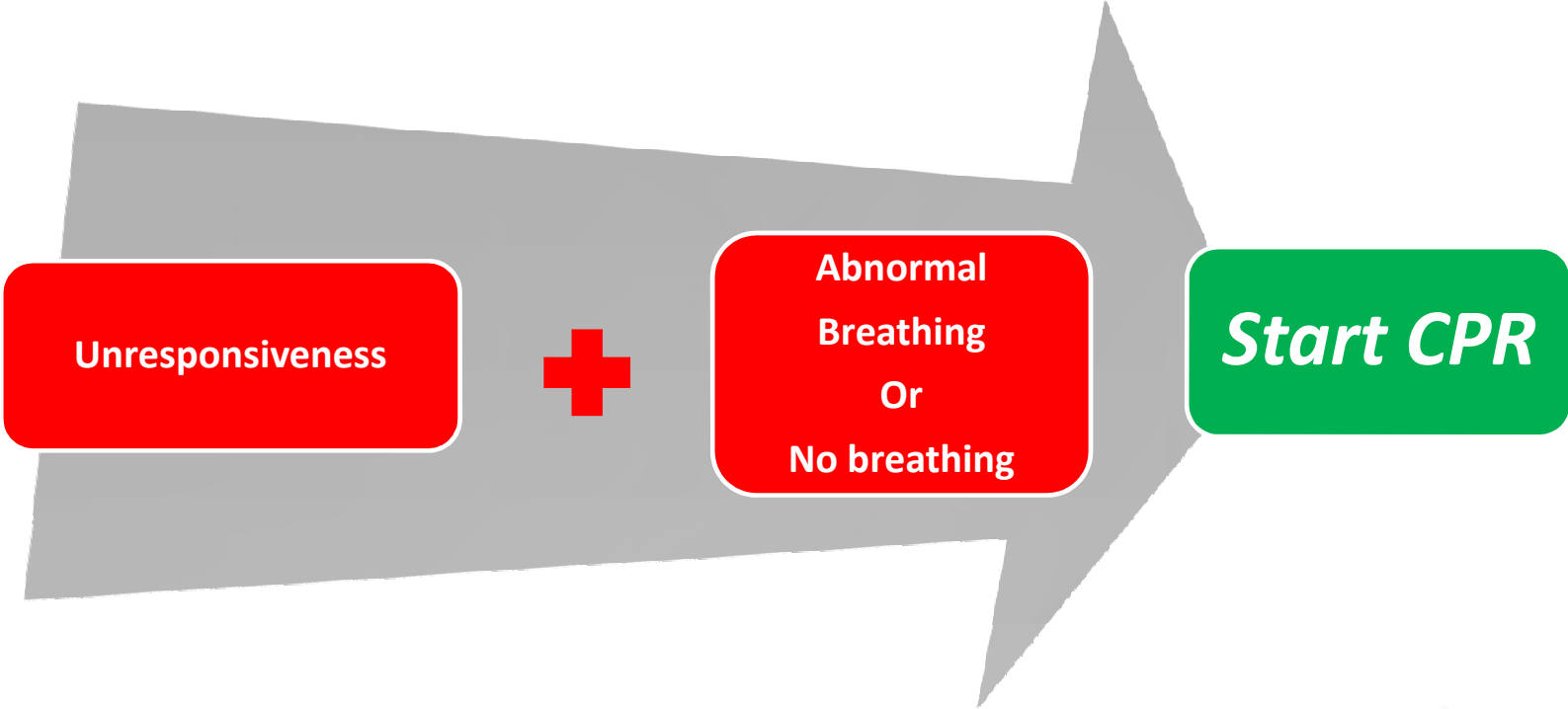
If intubation is delayed, consider using a supraglottic airway.

High-efficiency particulate air (HEPA)

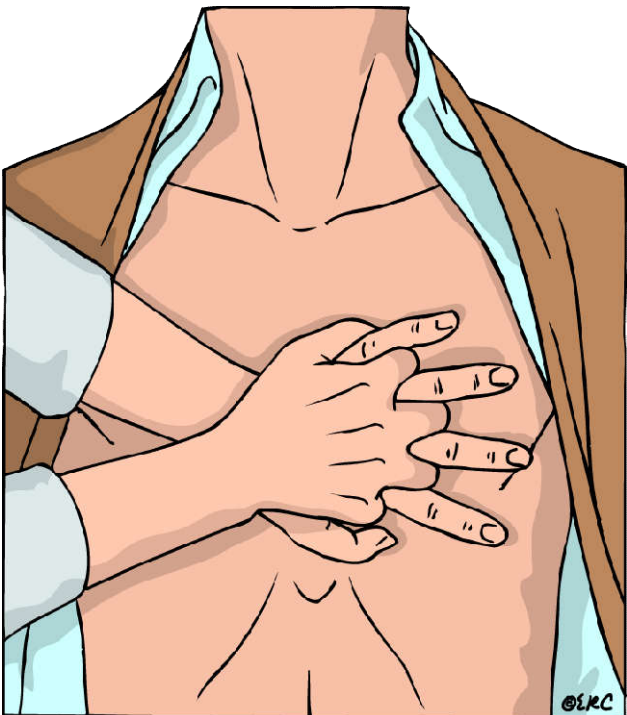




Start CPR When:



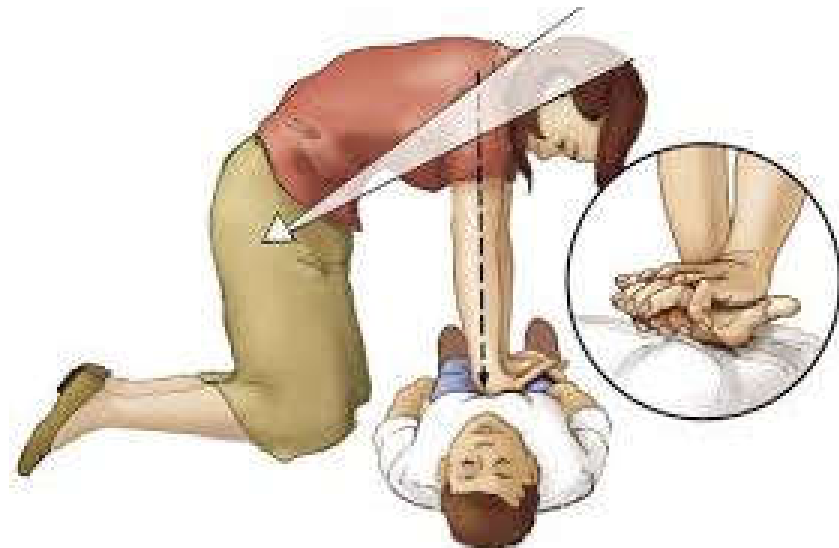
CHEST COMPRESSIONS



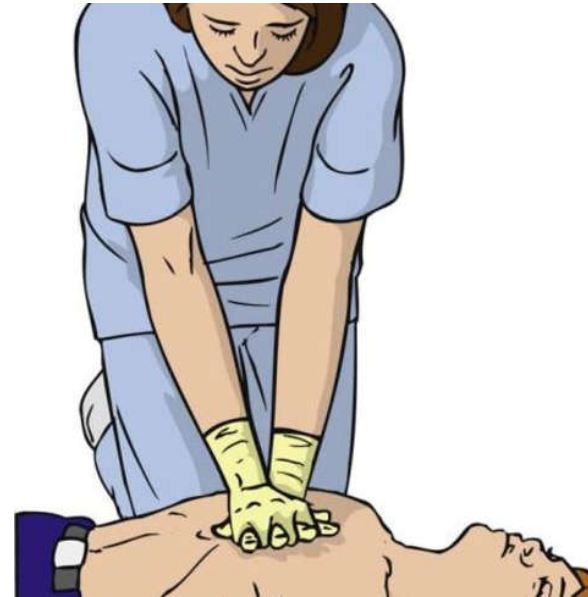
CHEST COMPRESSIONS

In adult

- **Push** hard and fast the chest
 - **Rate 100-120 /min**
 - **Depth 5-6 cm**
 - **Minimize interruptions** in chest compressions.
- When possible change CPR operator **every 2 min**



CHEST COMPRESSION In Child



CHEST COMPRESSION

In infant

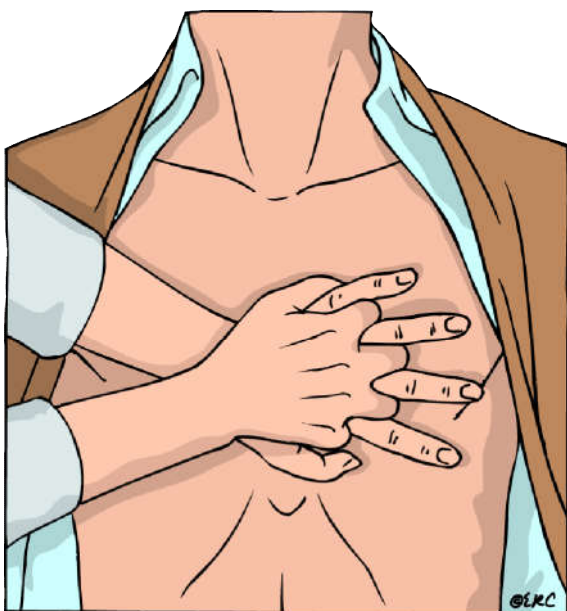


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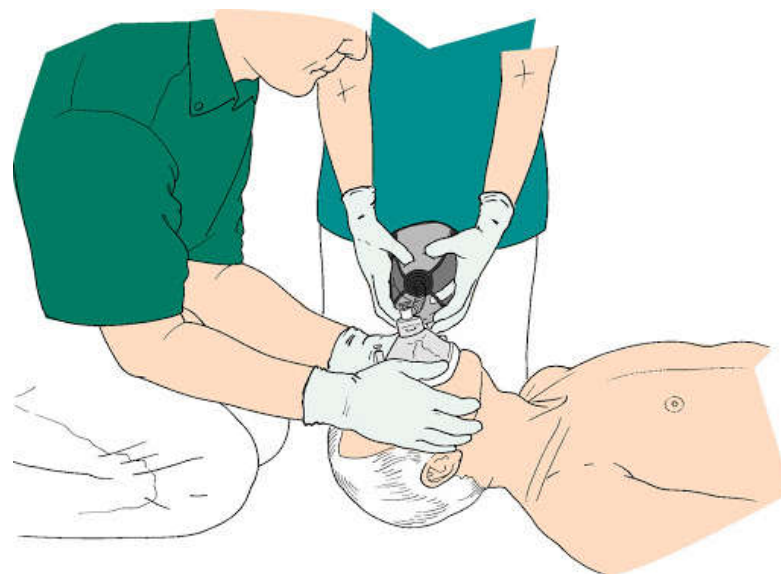
mechanical chest compression devices



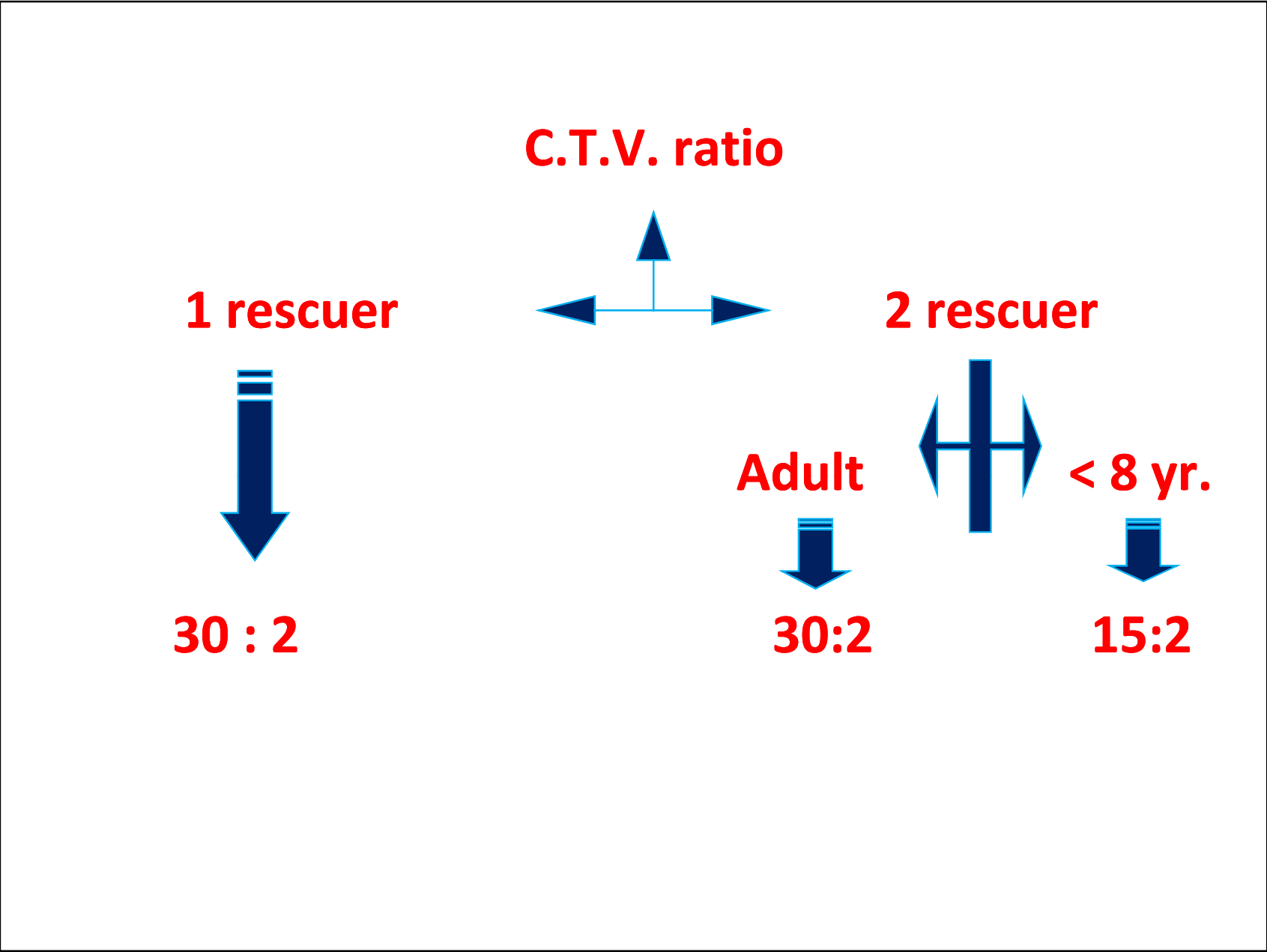
Compressions To Ventilations Ratio



30



2



Open Airway

Head Tilt- Chin Lift



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Jaw Thrust

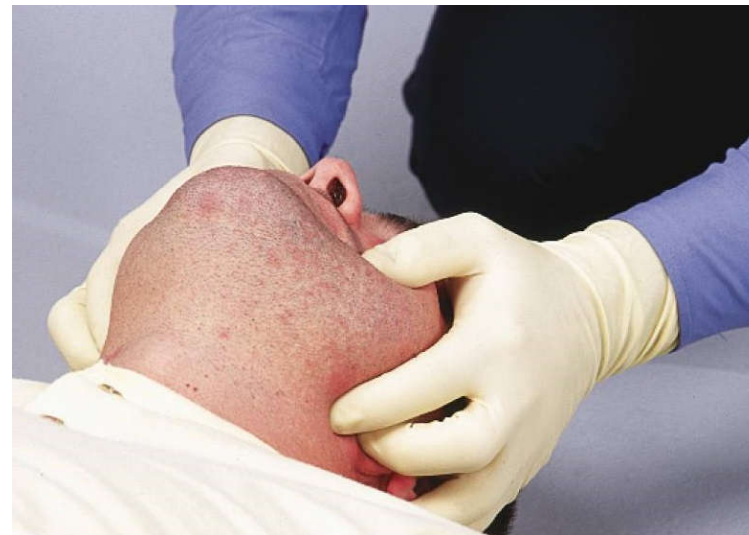


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Head Tilt- Chin Lift

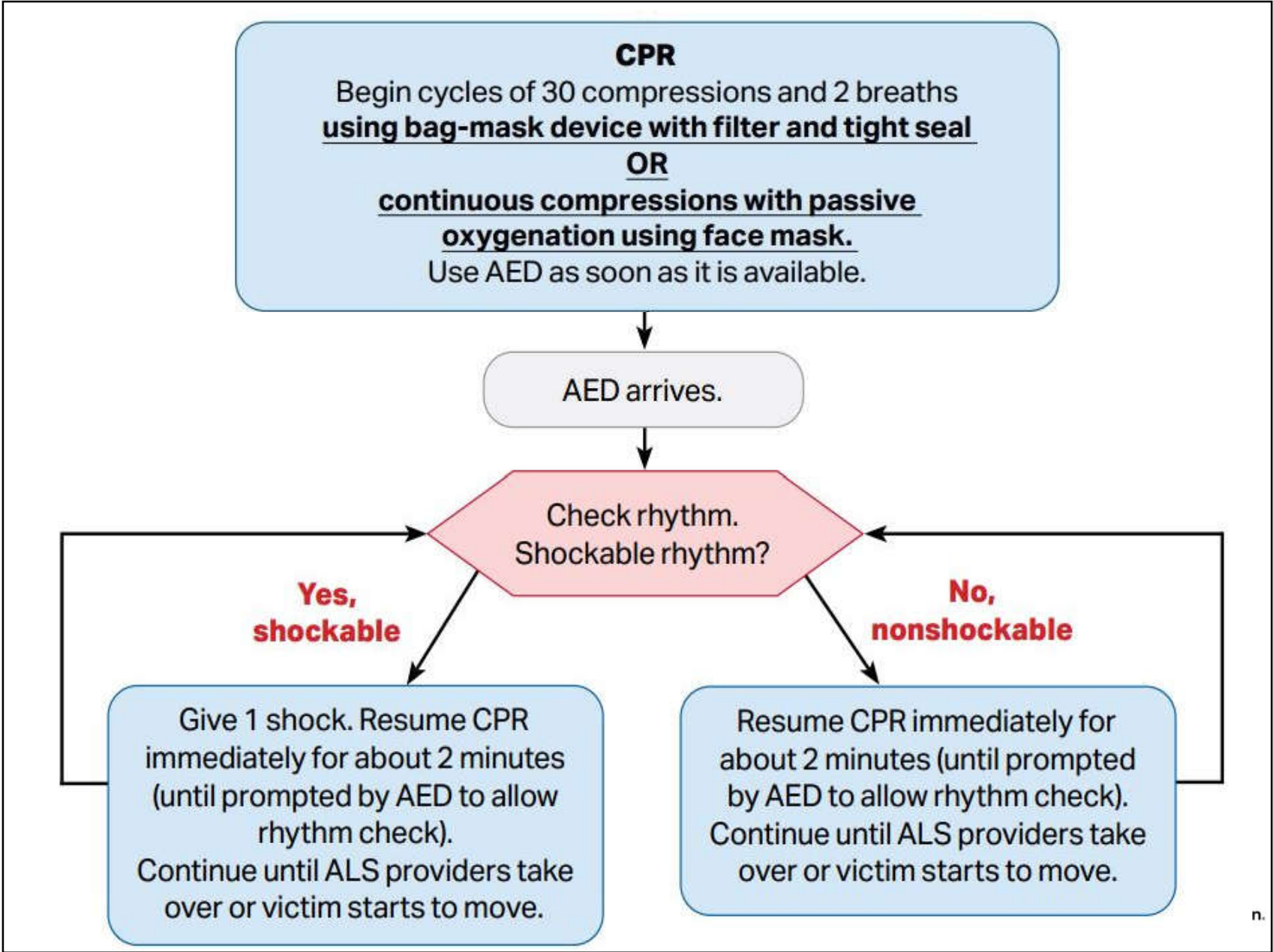


Jaw Thrust



E-C clamp technique

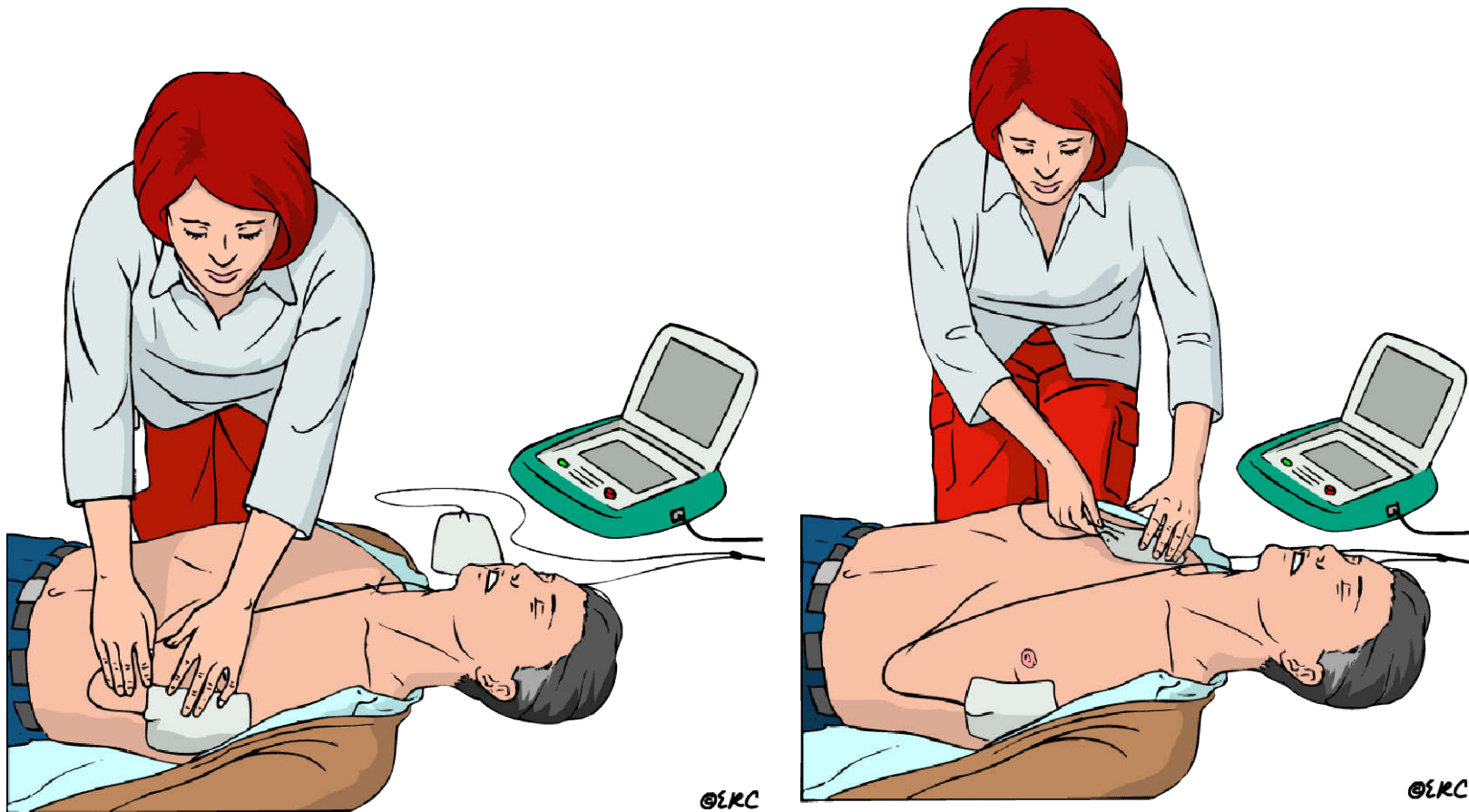




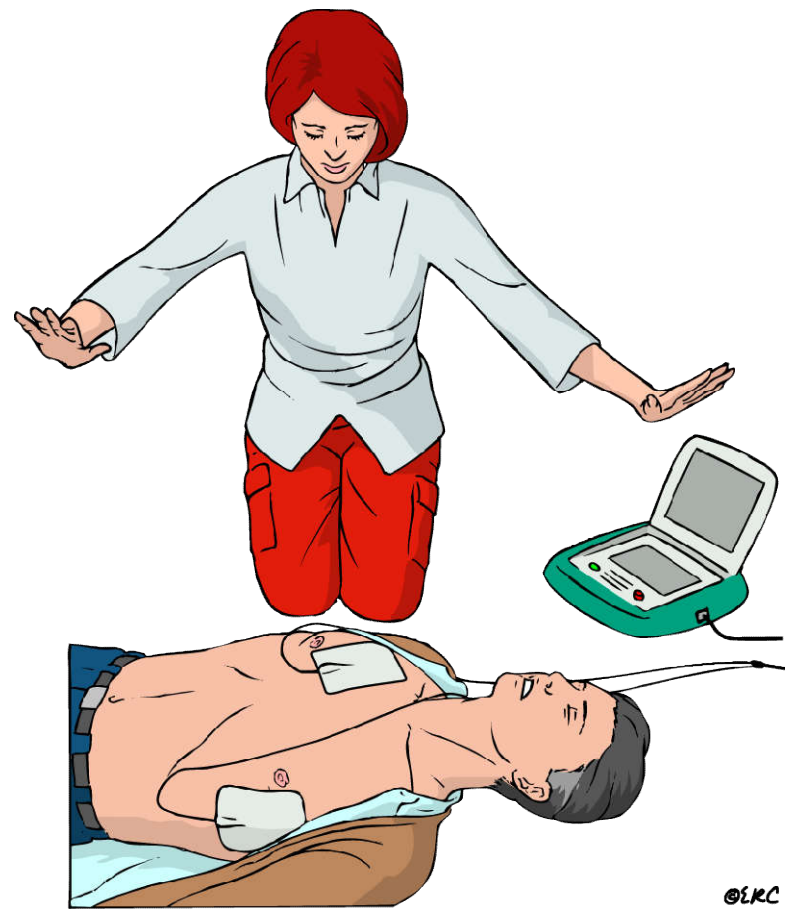
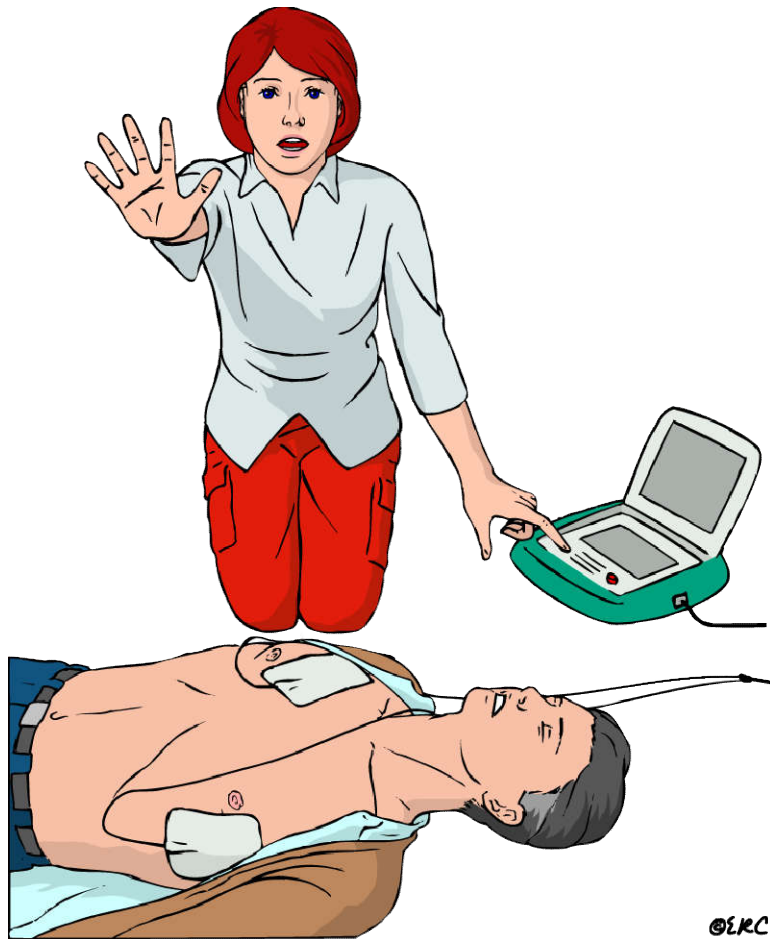
Automated External Defibrillator (AED)

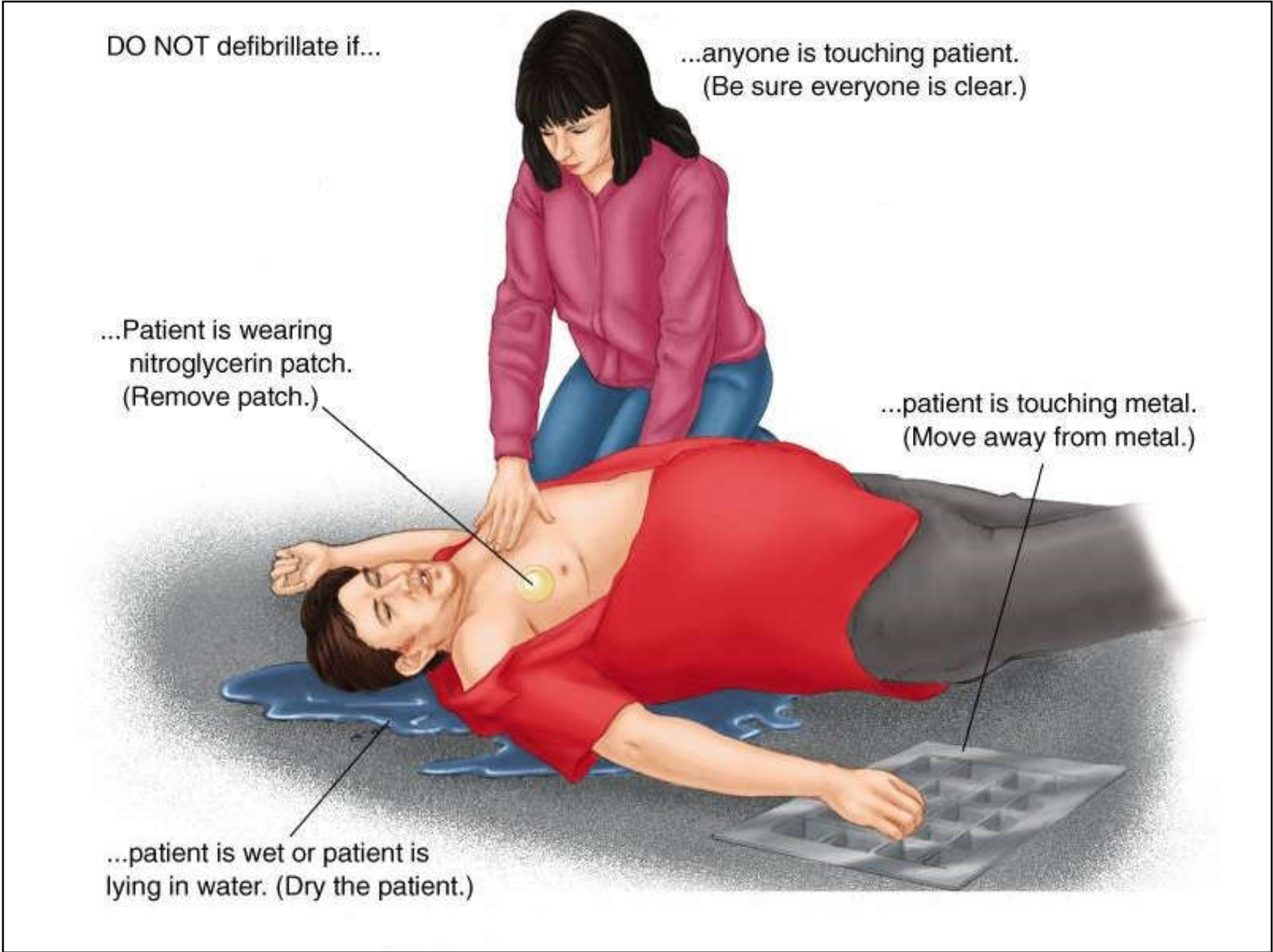


Attach AED to Patient



Analyze - Once clear - Deliver a shock





Resume CPR immediately



©ERC

HANDS ONLY CPR



COVID-19 and Adult CPR

If an adult's heart stops and you're worried that they may have COVID-19, you can still help by performing Hands-Only CPR.



Step 1



Phone 9-1-1 and get an AED.

Step 2



Cover your own mouth and nose with a face mask or cloth.



Cover the person's mouth and nose with a face mask or cloth.

Step 3



Perform Hands-Only CPR.
Push hard and fast on the center of the chest at a rate of 100 to 120 compressions per minute.

Step 4



Use an AED as soon as it is available.

