Cardiopulmonary resuscitation will be initiated on all patients who have suffered a cardiopulmonary arrest, except for those with obvious signs of irreversible biological death and those with a valid Do Not Resuscitate Order (DNRO) **Protocol 28**. ***Once resuscitation efforts have been initiated, they cannot be terminated unless a valid DNRO is presented, or obvious signs of irreversible biological death are discovered.*** The criteria used to withhold or terminate resuscitation **must** be documented in the Narrative Section of the Patient Care Report.

Extreme caution must be exercised in any decision to withhold cardiopulmonary resuscitation. When there is reasonable doubt about the patient's viability, resuscitation procedures will be initiated.

Cardiac arrest patients may present with any combination of the following ***presumptive*** signs and symptoms:

- Unwitnessed
- Pulseless
- Apneic
- Trismus
- Discolored
- Cool and pale
- Fixed and dilated pupils
- Asystole

These are NOT reasons to withhold resuscitation. These patients should still be resuscitated following the most appropriate algorithm in Protocol 9.

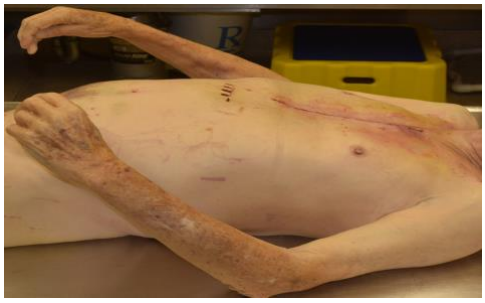
A. Withholding Resuscitation Procedures

The following guidelines are to be used to determine whether cardiopulmonary resuscitation may be withheld or terminated:

1. After a Primary Assessment **Protocol 1** it is determined that there is an absence of pulse and spontaneous respirations coupled with an EKG reading of asystole (confirmed in at least 2 leads), agonal rhythm less than 10 bpm, **and** any of the following ***conclusive*** signs:

    a) Tissue decomposition.

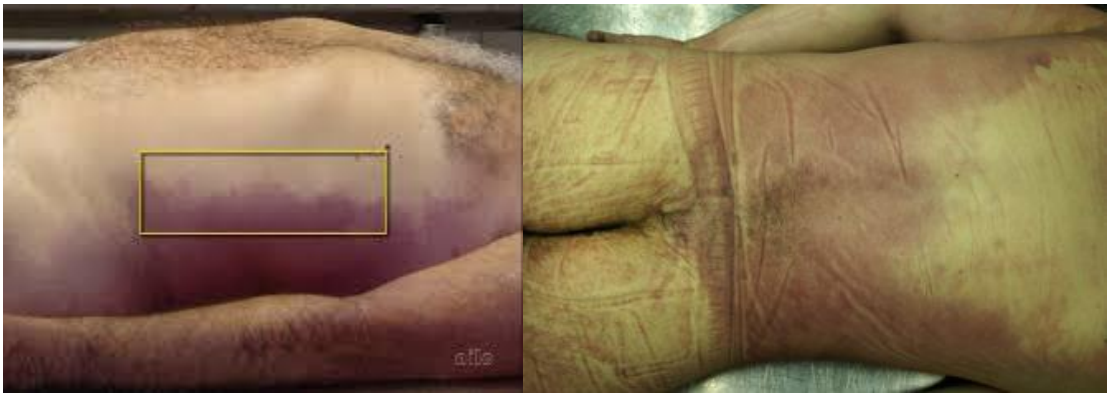
    b) **Rigor Mortis** with warm air temperature - hardening of the muscles of the body, making the joints rigid and the presence of fixed and non-reactive pupils.



Top

c) **Livor Mortis -** venous pooling of blood in dependent body parts causing purple discoloration of the skin, which does not blanch with pressure and the presence of fixed and non-reactive pupils.

Note: Similar but milder changes can be seen in severe, but reversible shock. Care must be exercised to distinguish between the two – mottling versus lividity.



2. ***Traumatic Cardiac Arrest Only***

After a Primary Assessment **Protocol 1** it is determined that there is an absence of pulse and spontaneous respirations coupled with an EKG reading of asystole (confirmed in at least 2 leads), agonal or idioventricular rhythm less than 10 bpm, Pulseless Electrical Activity (PEA) rhythm less than 50 bpm **and** any of the following ***conclusive*** signs:

a) Injuries obviously incompatible with life, e.g., decapitation, massive crush injury.

b) Obvious blunt trauma.

c) Isolated gunshot wound to the head.

b) Tissue decomposition.

c) **Rigor Mortis** with warm air temperature - hardening of the muscles of the body, making the joints rigid and the presence of fixed and non-reactive pupils.

d) **Livor Mortis** - venous pooling of blood in dependent body parts causing purple discoloration of the skin, which does not blanch with pressure and the presence of fixed and non-reactive pupils.

Note: Similar but milder changes can be seen in severe, but reversible shock. Care must be exercised to distinguish between the two – mottling versus lividity.

3. Absence of spontaneous respiration after repositioning the airway in a multiple casualty situation.

Top

4. In situations where CPR has been initiated on a patient who has previously expressed contrary desires through a properly documented DNRO, or a patient that would otherwise meet the guidelines above, CPR should be discontinued.

B. DOA Procedures

1. Advise the Fire Alarm Office to dispatch the appropriate law enforcement agency for institution of procedures for death on the scene.

2. Once all necessary information has been gathered and law enforcement have arrived, if the scene is stable (no family members in crisis or other patients being treated), the unit may clear.

C. Termination of Resuscitation

1. Extreme caution must be exercised in any decision to withhold cardiopulmonary resuscitation. When there is reasonable doubt about the patient's viability, resuscitation procedures will be initiated. Once CPR is begun, it should not be terminated except under the specific criteria outlined below or with a valid DNRO **Protocol 28**.

2. Resuscitation efforts may be terminated if **ALL** of the following criteria are met:

   a) The patient was a non-witnessed cardiac arrest **and,**

   b) The patient maintained a non-shockable EKG reading throughout the resuscitation **and,**

   c) The patient has no Return of Spontaneous Circulation (ROSC) after 20 minutes of resuscitation **and,**

   d) The patient has an advanced airway (ET Tube) in place and an ETCO2 reading < 10 after 20 minutes of resuscitation.

3. When a decision is made not to initiate resuscitation efforts or to terminate resuscitation efforts, the criteria on which the decision was based must be documented in the “narrative” section of the ePCR. All equipment used for airway, intraosseous and vascular access (i.e. ET tube, IV/IO catheters) should remain undisturbed in the position placed when resuscitative efforts were terminated.

D. Special Notes

1. Irreversible biological death is difficult to determine in the hypothermic, drowning, and electrocution patients. These patients can be pulseless, apneic and stiff, and still be viable candidates for resuscitation. Resuscitation efforts should not be terminated for these patients. Follow the most appropriate algorithm in **Protocol 9** and transport to the most appropriate facility.

Top

2. In situations where the deceased patient must be removed from the scene (environmental concerns, hostile situation, etc.) the medically related patient will be transported to the closest facility and the trauma related death to the closest appropriate Trauma Center for DOA procedures. In these instances, transport routine and have the FAO advise the appropriate law enforcement agency.

3. In extraordinary circumstances (extreme difficulty moving a patient from the scene and for the safety of the crews), an EMS Field Supervisor may approve the termination of efforts, even if one or more of the criteria are not met and at least 20 minutes of resuscitation efforts have been completed. The circumstances on which the decision was based must be documented in the “narrative” section of the ePCR.

4. In situations where patients are noted with gross decay and/or extremely obvious massive trauma (e.g., decapitation, massive crush injury), an EKG reading is not necessary to be attached to the ePCR. The assessment of the injuries and/or findings MUST be properly documented in a detailed narrative and physical assessment.

Top