



Performance Standard		7310
Effective April 1, 2018	Expires March 31, 2019	
Category I Skill – Low Frequency/High Risk: Defibrillation	Approval: Medical Director Reza Vaezazizi, MD	Signed
Applies To: PM, MICN, BHP, EMS System	Approval: REMSA Director Bruce Barton	Signed

Terminal Performance Objective

Termination of pulseless ventricular tachycardia or ventricular fibrillation using electrical therapy.

Before performing defibrillation, paramedics must:

1. Determine pulselessness within 10 seconds
2. Follow applicable REMSA protocols for CPR and resuscitation
3. Confirm that the patient is in a shockable rhythm (pulseless ventricular tachycardia or ventricular fibrillation)
 - a. Confirm ECG monitor leads have been placed appropriately
4. Explain to patient’s family what they can expect to see while avoiding delays in treatment.

While performing defibrillation, paramedics must:

1. Select and prepare the appropriate sites for application of the ECG monitor/defibrillator multifunction pads (MFPs).
 - a. Proper pad placement on the patient’s cleaned, dry skin is essential to maximize current conduction; the better the contact, the more effective attempts at defibrillation will be
2. Apply the MFPs firmly to the patient’s clean, bare skin in the correct anatomical locations for maximum electrical current flow through the heart
3. Identify a patient with a pacemaker or automatic internal cardiac defibrillator (AICD) and place the MFP(s) in alternate position(s) to minimize damage to the device(s) and to avoid disruption of current flow through the heart
4. Ensure that the ECG monitor/defibrillator is not in the synchronize mode
5. Select the correct energy setting on the ECG monitor/defibrillator
 - a. Per the REMSA Treatment Protocol: Calculation Chart
6. Assure everyone is clear from the patient and all possible energy conducting surfaces/contacts
7. Discharge the defibrillator
8. Immediately resume chest compressions for 2 minutes without checking for a pulse
9. Treat subsequent rhythms per REMSA protocols

Critical Success Targets for Defibrillation

1. Successful delivery of electrical current at the proper setting to the heart of a patient in pulseless ventricular tachycardia or ventricular fibrillation
2. Safe and proficient use of the ECG monitor/defibrillator including lead and MFP placement

System Benchmark

% of patients receiving defibrillation with restoration of a stable perfusing rhythm

Core Competency Requirements to be covered during education/training on defibrillation

1. Cardiovascular A & P
2. Cardiology – pathophysiology of malignant ventricular dysrhythmias
3. Assessment of circulation and recognition of hemodynamic instability
4. ECG rhythm interpretation – ventricular tachycardia and ventricular fibrillation
5. Indications and contraindications for defibrillation
6. Proper placement of ECG electrodes on patient

7. Proper placement of multifunction pads on patient
8. Knowledge of the monitor/defibrillator
9. Joules used in each defibrillation
10. Methods to help eliminate impedance from chest walls
11. Early defibrillation in pulseless ventricular tachycardia and ventricular fibrillation
12. Defibrillation with a implantable cardioverter defibrillator

Adjunctive Performance Standards

Currently no adjunctive performance standards have been created

Equipment Requirements

1. Monitor/defibrillator
2. ECG electrodes
3. Multifunction pads
4. Razor
5. 4 x 4 gauze pads
6. Alcohol preps

Instructor Resource Materials

1. REMSA Protocol Manual
 - a. REMSA Calculation Chart
2. ECG monitor/defibrillator manufacturer guidelines
3. Paramedic Care Principles & Practice, Third Edition, Bledsoe, Porter and Cherry
4. 2010 American Heart Association Guidelines for ECC and CPR

Defibrillation Validation

PERFORMANCE OBJECTIVE: Termination of pulseless ventricular tachycardia or ventricular fibrillation

PERFORMANCE CRITERIA: 100% accuracy required on all items marked with an *

Before defibrillating, paramedics must:

Pts	Score	Performance Steps	Additional Information
1		Take or verbalize body substance isolation	Selection: gloves, goggles, mask, gown, booties, P100 PRN
1		Determine pulselessness within 10 seconds *	
1		Follow applicable REMSA protocols for CPR and resuscitation	
1		Confirm that the patient is in a shockable rhythm (pulseless ventricular tachycardia or ventricular fibrillation) *	Confirm ECG monitor leads have been placed appropriately.
1		Confirm the ECG monitor leads have been placed appropriately *	
1		Explain to patient's family what they can expect to see while avoiding delays in treatment	

While defibrillating, paramedics must:

Pts	Score	Performance Steps	Additional Information
1		Apply the ECG monitor/defibrillator MFPs firmly to the patient's clean, bare skin in the correct anatomical locations for maximum electrical current flow through the heart *	<ul style="list-style-type: none"> • Anterior-posterior placement is recommended, if possible • Proper pad placement on the patient's cleaned, dry skin is essential to maximizing conduction; the better the contact, the more effective attempts at defibrillation will be
1		Identify a patient with a pacemaker or automatic internal cardiac defibrillator (AICD) and place the MFP(s) in alternate position(s) to minimize damage to the device and to avoid disruption of current flow through the heart *	
1		Ensure that the ECG monitor/defibrillator is not in the synchronize mode *	

1		Select the correct energy setting on the ECG monitor/defibrillator *	Per the REMSA Treatment Protocol: Calculation Chart
1		Assure everyone is clear from the patient and all possible energy conducting surfaces/contacts *	
1		Discharge the defibrillator for unsynchronized delivery of electrical current *	
1		Immediately resume chest compressions for 2 minutes without checking for a pulse *	
1		Maintain calm and effectively lead a team-based approach to resuscitation under all conditions *	
1		Provide treatment based upon reassessment findings	
1		Accurately document all assessment findings, therapeutic treatments, and the patient's response to therapy *	

Critical Failure Criteria

- ___ Failure to take or verbalize BSI appropriate to the skill prior to performing the skill.
- ___ Failure to identify indications for procedure.
- ___ Failure to ensure the functionality of cardiac monitor and availability of equipment.
- ___ Failure to assure that everyone is clear prior to discharging the defibrillator.
- ___ Failure to immediately begin chest compressions following defibrillation without checking for a pulse.
- ___ Any procedure that would have harmed the patient.