



Operational Policy		3301
Effective October 1, 2018		Expires March 31, 2019
Policy: Drug and Equipment List	Approval: Medical Director Reza Vaezazizi, MD	Signed
Applies To: PSP, EMT, AEMT, PM, MICN, BHP, EMS System	Approval: REMSA Director Bruce Barton	Signed

APPLICATION

This policy applies to public safety personnel (PSP), emergency medical technician (EMT), advanced emergency medical technician (AEMT), paramedic (PM), and critical care paramedic (CCP); and the first response agencies and transport services; that constitute the organized EMS system in Riverside County.

PURPOSE

The purpose of this policy is to set equipment requirements for Riverside County EMS Agency (REMSA) authorized PSP, EMT, AEMT, PM, or CCP staffed light response, first response, ground transport, and air transport operations.

Drug and Equipment List

This policy lists the required equipment and minimum quantities to be carried by each EMS light response unit*, first response vehicle, ground transport vehicle, or paramedic staffed air ambulance operating in Riverside County. Included are required and optional items, with minimum quantities indicated by the highest level of staffing. Operational needs must be met by carrying more than the minimum quantities. Optional equipment is indicated by a "0". Unauthorized equipment is indicated by an "X". Any omitted equipment is not authorized except as required by law. Equipment trials must be authorized by the EMS Agency.

* Light response operations include authorized non-vehicular and small vehicle programs which access patients primarily by foot, bicycle, motorcycle, all-terrain vehicle, personal watercraft, or similar means.

Personal Documents

Personal documents are listed per staff person. These documents must be current and valid; and carried as originals, photocopies, or as digital reproductions.

Personal Documents	Light Response			First Response			Ground Transport			Air	
	EMT	AEMT	PM	PSP	EMT	AEMT	PM	EMT	AEMT	PM	PM
First Responder/PSP Certificate	0	0	0	1	0	0	0	0	0	0	0
CA EMT Certificate	1	0	0	0	1	0	0	1 <small>CHP</small>	0	0	0
CA AEMT Certificate	0	1	0	0	0	1	0	0	1 <small>CHP</small>	0	0
CA PM License	0	0	1	0	0	0	1	0	0	1 <small>CHP</small>	1
CPR for the "Professional Rescuer" or "Healthcare Provider" Card	1	1	1	1	1	1	1	1	1	1	1
ACLS Card	0	0	1	0	0	0	1	0	0	1	1
PALS or PEPP Card	0	0	1	0	0	0	1	0	0	1	1

PHTLS or ITLS Card	0	0	1	0	0	0	1	0	0	1	1
Respirator Fit Card	0	0	0	0	0	0	0	0	0	0	0
TB Test Card	0	0	0	0	0	0	0	0	0	0	0
Vaccination Card	0	0	0	0	0	0	0	0	0	0	0

Personal Protective Equipment

Personal protective equipment is listed per staff person, and must be appropriately sized and fitted. All PPE must comply with OSHA/Cal OSHA regulations. Additionally:

1. Respiratory protection requires a P100 Mask or PAPR; or a SCBA with Cal OSHA variance. Requirements for respiratory protection include [Cal OSHA Title 8 Section 5144 Respiratory Protection](#), [Cal OSHA Title 8 Section 5199 Aerosol Transmissible Diseases](#), and 42 CFR 84; also refer to [NIOSH Respirator Selection Logic 2004](#) and [Selection and Use of Particulate Respirators Certified Under 42 CFR 84](#).
2. High visibility garments must meet [23 CFR 634](#), and [ANSI / ISEA 107 \(2010\)](#).
3. Medical exam gloves must meet [21 CFR 880.6250](#), or BS EN 455-2.

Personal protective equipment for light response units is mainly left unspecified as it must be selected based on the environment and type of operation.

The standards for first response PPE will defer to the more stringent standards firefighting standards.

Personal protective equipment for ground transport personnel must meet the NFPA 1999 EMS Standards and/or these requirements:

1. Helmets for ground transport personnel must meet ANSI Z89.1-1986 (Class B) standards.
2. Eye protection for ground transport personnel must meet ANSI Z87.1, or the equivalent.
3. Multiple use footwear for ground transport personnel must meet ANSI Z41-1991, or the equivalent.

Personal protective equipment for air transport personnel must meet the CAMTS criteria.

Personal Protective Equipment	Light Response			First Response				Ground Transport			Air
	EMT	AEMT	PM	PSP	EMT	AEMT	PM	EMT	AEMT	PM	PM
Helmet	0	0	0	1	1	1	1	1 EMSA	1 EMSA	1 EMSA	1
Hearing Protection	0	0	0	1	1	1	1	1 EMSA	1 EMSA	1 EMSA	1
Multiple-Use Eye Protection	1	1	1	1	1	1	1	1 EMSA	1 EMSA	1 EMSA	1
Respiratory Protection	1	1	1	1	1	1	1	1 EMSA	1 EMSA	1 EMSA	1
Uniform Shirt/Pant or Jumpsuit	0	0	0	2	2	2	2	2 EMSA	2 EMSA	2 EMSA	1
Uniform Cold Weather Outerwear	0	0	0	1	1	1	1	1 EMSA	1 EMSA	1 EMSA	1
High Visibility Garment	0	0	0	1	1	1	1	1	1	1	1
Barrier Garment	0	0	0	1	1	1	1	1 EMSA	1 EMSA	1 EMSA	0
Medical Exam Glove	6	6	6	6	6	6	6	6 EMSA	6 EMSA	6 EMSA	6
Work Glove	0	0	0	2	2	2	2	2 EMSA	2 EMSA	2 EMSA	0

Multiple-Use Footwear	0	0	0	2	2	2	2	2 EMSA	2 EMSA	2 EMSA	2
Single-Use Footwear Cover	0	0	0	2	2	2	2	2 EMSA	2 EMSA	2 EMSA	0
Hand Sanitizer	0	0	0	1	1	1	1	1	1	1	1
Pocket Mask	0	0	0	1	1	1	1	1	1	1	0
Nerve Agent Antidote Kit (NAAK)	0	0	0	0	0	0	0	0 EMSA	0 EMSA	0 EMSA	0
Escape Hood	0	0	0	0	0	0	0	0 EMSA	0 EMSA	0 EMSA	0
Surgical Mask	0	0	0	0	0	0	0	0	0	0	0
Sterile Glove	0	0	0	0	0	0	0	0	0	0	0
Gown	0	0	0	0	0	0	0	0	0	0	0

Personal Equipment

Personal equipment is listed per staff person.

Personal Equipment	Light Response			First Response				Ground Transport			Air
	EMT	AEMT	PM	PSP	EMT	AEMT	PM	EMT	AEMT	PM	PM
Flashlight	0	0	0	1	1	1	1	1 EMSA	1 EMSA	1 EMSA	0
Seatbelt Cutter	0	0	0	0	0	0	0	0 EMSA	0 EMSA	0 EMSA	0
Stethoscope	0	0	0	1	1	1	1	1 EMSA	1 EMSA	1 EMSA	0
Trauma Shears	0	0	0	1	1	1	1	1 EMSA	1 EMSA	1 EMSA	0
Two-way Portable Radio	0	0	0	0	0	0	0	0 EMSA	0 EMSA	0 EMSA	0
Window Punch	0	0	0	0	0	0	0	0 EMSA	0 EMSA	0 EMSA	0

Incident Command System

Incident Command System (ICS) equipment is listed per unit or vehicle. Each item must be the most current revision. PSP required equipment

Incident Command System	Light Response			First Response				Ground Transport			Air
	EMT	AEMT	PM	PSP	EMT	AEMT	PM	EMT	AEMT	PM	PM
Emergency Response Guidebook	0	0	0	1	1	1	1	1	1	1	1
Triage Tags	6	6	6	20	20	20	20	20	20	20	20
Field Operations Guide (ICS 420-1)	0	0	0	1	1	1	1	1 EMSA	1 EMSA	1 EMSA	1
Packet of ICS Forms including:214, 305, 306, 308, 310, 312	0	0	0	1	1	1	1	1 EMSA	1 EMSA	1 EMSA	1

Cervical Spine Stabilization & Splinting

Cervical spine stabilization and splinting equipment is listed per unit or vehicle.

Stabilization & Splinting	Light Response			First Response			Ground Transport			Air	
	EMT	AEMT	PM	PSP	EMT	AEMT	PM	EMT	AEMT	PM	PM
Adjustable Pediatric C-Collar	0	0	0	X	2 EMSC	2 EMSC	2 EMSC	2 EMSC	2 EMSC	2 EMSC	2
Adjustable Adult C-Collar	1	1	1	X	2 EMSC	2 EMSC	2 EMSC	2 EMSC	2 EMSC	2 EMSC	2
Disposable Head Stabilizer	0	0	0	X	1	1	1	1 CHP	1 CHP	1 CHP	1
Long Spine Board	0	0	0	X	1	1	1	1 CHP	1 CHP	1 CHP	0
15' D-Ring Spine Board Strap	0	0	0	X	2	2	2	2 CHP	2 CHP	2 CHP	0
8 Point Plus Hook & Loop Spine Board Strap (Spider Strap)	0	0	0	X	0	0	0	0	0	0	0
Speed Clip Spine Board Straps (4 Speed Clip Straps per Board)	0	0	0	X	0	0	0	0	0	0	0
Medical Duct Tape	0	0	0	X	0	0	0	0	0	0	0
KED Type Extrication Device	0	0	0	X	1	1	1	1 CHP	1 CHP	1 CHP	0
Pediatric Stabilization Device	0	0	0	X	1	1	1	1	1	1	1
Scoop or "Special" Stretcher	0	0	0	X	0	0	0	0	0	0	0
Vacuum Mattress, Pump, and Supplies	0	0	0	X	0	0	0	0	0	0	0
Arm Splint	1	1	1	2 EMSC	2 EMSC	2 EMSC	2 EMSC	2 CHP	2 CHP	2 CHP	2
Leg Splint	0	0	0	2 EMSC	2 EMSC	2 EMSC	2 EMSC	2 CHP	2 CHP	2 CHP	0
Traction Splint(s) with Pediatric and Adult Capabilities	0	0	0	X	1 EMSC	1 EMSC	1 EMSC	1 CHP	1 CHP	1 CHP	1

Assessment

Assessment equipment is listed per unit or vehicle. The Broselow Tape color/kg must correspond to the REMSA Calculation Chart.

Assessment	Light Response			First Response			Ground Transport			Air	
	EMT	AEMT	PM	PSP	EMT	AEMT	PM	EMT	AEMT	PM	PM
Penlight	1	1	1	1	1	1	1	2	2	2	2
Trauma Shears	1	1	1	1	1	1	1	1 CHP	1 CHP	1 CHP	2
Stethoscope	1	1	1	1	1	1	1	2 CHP	2 CHP	2 CHP	2
Infant BP Cuff	0	0	0	X	0	0	0	0	0	0	0
Child BP Cuff	0	0	0	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1
Adult BP Cuff	1	1	1	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1 CHP	1 CHP	1 CHP	1

Large Adult BP Cuff	0	0	0	1	1	1	1	1	1	1	1
Thigh BP Cuff	0	0	0	X	0	0	0	0	0	0	0
Broselow™ Tape	0	0	0	X	0	1 EMSC	1 EMSC	0	1 EMSC	1 EMSC	1
Measuring Tape	0	0	0	X	0	0	0	0	0	0	0
Laminated copy of the REMSA Calculation Chart	0	1	1	X	0	1 EMSC	1 EMSC	0	1 EMSC	1 EMSC	1
Calculator	0	0	0	X	0	0	0	0	0	0	0
Pulse Oximeter with Pediatric and Adult Probes, and Supplies	0	0	0	X	0 EMSC	1 EMSC	1 EMSC	0 EMSC	1 EMSC	1 EMSC	1
Glucometer with Lancets, Test Strips, and Supplies	X	1	1	X	X	1	1	X	1	1	1
Thermometer (non-rectal use only) with Supplies	1	1	1	X	0	0	0	0	0	0	0
Ring Cutter	0	0	0	0	0	0	0	0	0	0	0
Splinter Kit	1	1	1	0	0	0	0	0	0	0	0
Response Pack(s), Bag(s), or Case(s)	1	1	1	1	1	1	1	1	1	1	1

Suction

Suction equipment is listed per unit or vehicle.

Suction	Light Response			First Response			Ground Transport			Air	
	EMT	AEMT	PM	PSP	EMT	AEMT	PM	EMT	AEMT	PM	PM
Manually Powered Portable Suction Unit with Collection Container and Supplies	1	1	1	0	0	0	0	1 CHP	0	0	0
Battery Powered Portable Suction Unit with Collection Container, Battery(ies), and Supplies	0	0	0	1	1	1	1	0	1 CHP	1 CHP	1
Wall Mount Suction with Collection Container and Supplies	0	0	0	0	0	0	0	1	1	1	1
Suction Tubing	0	0	0	1	1	1	1	2 CHP	2 CHP	2 CHP	1
Rigid or Semi-Rigid Suction Tip	0	0	0	1 EMSC	1 EMSC	1 EMSC	1 EMSC	2 CHP	2 CHP	2 CHP	1
Bulb Syringe	0	0	0	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1
Suction Catheter 6 Fr.	0	0	0	X	0	0	0	0	0	0	0
Suction Catheter 8 Fr.	0	0	0	X	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1
Suction Catheter 10 Fr.	0	0	0	X	1	1	1	1	1	1	1
Suction Catheter 12 Fr.	0	0	0	X	0	0	0	0	0	0	0
Suction Catheter 14 Fr.	0	0	0	X	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1

Suction Catheter 16 Fr.	0	0	0	X	0	0	0	0	0	0	0
Suction Catheter 18 Fr.	0	0	0	X	0	0	0	0	0	0	0

BLS Airway

BLS airway equipment is listed per unit or vehicle.

BLS Airway	Light Response			First Response			Ground Transport			Air	
	EMT	AEMT	PM	PSP	EMT	AEMT	PM	EMT	AEMT	PM	PM
Size 0 (50 mm) Oropharyngeal Airway (OPA)	0	0	0	0	0	0	0	0	0	0	0
Size 1 (60 mm) Oropharyngeal Airway (OPA)	0	0	0	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1 CHP	1 CHP	1 CHP	1
Size 2 (70 mm) Oropharyngeal Airway (OPA)	0	0	0	0	0	0	0	0	0	0	0
Size 3 (80 mm) Oropharyngeal Airway (OPA)	0	0	0	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1 CHP	1 CHP	1 CHP	1
Size 4 (90 mm) Oropharyngeal Airway (OPA)	1	1	1	0	0	0	0	0	0	0	0
Size 5 (100 mm) Oropharyngeal Airway (OPA)	1	1	1	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1 CHP	1 CHP	1 CHP	1
14 Fr. Nasopharyngeal Airway (NPA)	0	0	0	0	0	0	0	0	0	0	0
16 Fr. Nasopharyngeal Airway (NPA)	0	0	0	0	0	0	0	0	0	0	0
18 Fr. Nasopharyngeal Airway (NPA)	0	0	0	0	0	0	0	0	0	0	0
20 Fr. Nasopharyngeal Airway (NPA)	0	0	0	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1
22 Fr. Nasopharyngeal Airway (NPA)	0	0	0	0	0	0	0	0	0	0	0
24 Fr. Nasopharyngeal Airway (NPA)	0	0	0	0	0	0	0	0	0	0	0
26 Fr. Nasopharyngeal Airway (NPA)	0	0	0	0	0	0	0	0	0	0	0
28 Fr. Nasopharyngeal Airway (NPA)	0	0	0	0	0	0	0	0	0	0	0
30 Fr. Nasopharyngeal Airway (NPA)	0	0	0	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1
32 Fr. Nasopharyngeal Airway (NPA)	0	0	0	0	0	0	0	0	0	0	0
34 Fr. Nasopharyngeal Airway (NPA)	0	0	0	0	0	0	0	0	0	0	0
36 Fr. Nasopharyngeal Airway (NPA)	0	0	0	0	0	0	0	0	0	0	0
Lubricating Jelly Packets	0	0	0	2	2	2	2	2	2	2	2

Laryngoscopy

Laryngoscopy equipment is listed per unit or vehicle.

Laryngoscopy	Light Response			First Response			Ground Transport			Air	
	EMT	AEMT	PM	PSP	EMT	AEMT	PM	EMT	AEMT	PM	PM
Laryngoscope Handle with Batteries	X	X	1	X	X	X	1	X	X	1	1
Extra Batteries	X	X	0	X	X	X	2	X	X	2	2
0 Straight Blade	X	X	0	X	X	X	1 EMSC	X	X	1 EMSC	1
1 Straight Blade	X	X	0	X	X	X	1 EMSC	X	X	1 EMSC	1
2 Straight Blade	X	X	0	X	X	X	1 EMSC	X	X	1 EMSC	1
3 Straight Blade	X	X	0	X	X	X	1 EMSC	X	X	1 EMSC	1
4 Straight Blade	X	X	1	X	X	X	1	X	X	1	1
1 Curved Blade	X	X	0	X	X	X	0	X	X	0	0
2 Curved Blade	X	X	0	X	X	X	1 EMSC	X	X	1 EMSC	1
3 Curved Blade	X	X	0	X	X	X	1 EMSC	X	X	1 EMSC	1
4 Curved Blade	X	X	1	X	X	X	1	X	X	1	1
Extra Bulbs (if applicable to device)	X	X	2	X	X	X	2	X	X	2	1
Video Laryngoscope and Supplies	X	X	0	X	X	X	0	X	X	0	0
Pediatric Magill Forceps	X	X	0	X	X	X	1 EMSC	X	X	1 EMSC	1
Adult Magill Forceps	X	X	0	X	X	X	1 EMSC	X	X	1 EMSC	1

ALS Airway

ALS airway equipment is listed per unit or vehicle.

ALS Airway	Light Response			First Response			Ground Transport			Air	
	EMT	AEMT	PM	PSP	EMT	AEMT	PM	EMT	AEMT	PM	PM
Size 3 Yellow King LT-D or LTS-D Airway	X	0	0	X	X	1	1	X	1	1	1
Size 4 Red King LT-D or LTS-D Airway	X	1	1	X	X	1	1	X	1	1	1
Size 5 Purple King LT-D or LTS-D Airway	X	0	0	X	X	1	1	X	1	1	1
6 mm Cuffed Endotracheal Tube	X	X	1	X	X	X	2 EMSC	X	X	2 EMSC	2
6.5 mm Cuffed Endotracheal Tube	X	X	0	X	X	X	0	X	X	0	0

7 mm Cuffed Endotracheal Tube	X	X	0	X	X	X	2 EMSC	X	X	2 EMSC	2
7.5 mm Cuffed Endotracheal Tube	X	X	1	X	X	X	0	X	X	0	0
8 mm Cuffed Endotracheal Tube	X	X	0	X	X	X	2 EMSC	X	X	2 EMSC	2
8.5 mm Cuffed Endotracheal Tube	X	X	0	X	X	X	0	X	X	0	0
9 mm Cuffed Endotracheal Tube	X	X	0	X	X	X	0	X	X	0	0
Adult Endotracheal Intubation Stylet	X	X	1	X	X	X	1 EMSC	X	X	1 EMSC	1
Endotracheal Tube Introducer Stylet (Bougie)	X	X	0	X	X	X	1	X	X	1	1
Commercial Endotracheal Tube Securing Device	X	X	1	X	X	X	1	X	X	1	1

Ventilation

Ventilation equipment is listed per unit or vehicle. PSP equipment requirements apply to REMSA authorized providers.

Ventilation	Light Response			First Response			Ground Transport			Air	
	EMT	AEMT	PM	PSP	EMT	AEMT	PM	EMT	AEMT	PM	PM
Neonate Resuscitator Mask	0	0	0	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1
Infant Resuscitator Mask	0	0	0	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1 CHP	1 CHP	1 CHP	1
Pediatric Bag Valve Mask (BVM) Resuscitator Mask O ₂ Reservoir	0	0	0	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1 CHP	1 CHP	1 CHP	1
Adult Bag Valve Mask (BVM) Resuscitator Mask O ₂ Reservoir	1	1	1	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1 CHP	1 CHP	1 CHP	1
Manometer for BVM	1	1	1	0	2	2	2	2	2	2	2
Pedi. Colorimetric CO ₂ Detector	0	0	0	0	0	1 EMSC	1 EMSC	0	1 EMSC	1 EMSC	1
Adult Colorimetric CO ₂ Detector	0	1	1	0	0	1 EMSC	1 EMSC	0	1 EMSC	1 EMSC	1
O2-RESQ™ CPAP Device Flow Generator and Circuit Medium Bi-Trac ED Mask Head Strap 5/7.5/10 cmH ₂ O Variable Valve	X	X	0	X	X	X	1	X	X	1	1
O2-RESQ™ Large Bi-Trac ED Mask	X	X	0	X	X	X	1	X	X	1	1
O2-RESQ™ 12.5 cmH ₂ O Valve	X	X	0	X	X	X	1	X	X	1	1
O2-RESQ™ 15 cmH ₂ O Valve	X	X	0	X	X	X	1	X	X	1	1
O2-RESQ™ 20 cmH ₂ O Valve	X	X	0	X	X	X	1	X	X	1	1
1.75-2 inch 18 g IV Catheter for Needle Chest Decompression	X	X	2	X	X	X	2	X	X	2	1

3.25 inch 16 g IV Catheter for Needle Chest Decompression	X	X	0	X	X	X	0	X	X	0	0
3.25 inch 14 g IV Catheter for Needle Chest Decompression	X	X	2	X	X	X	2	X	X	2	1
One-way Flutter Valve for Needle Chest Decompression	X	X	0	X	X	X	0	X	X	0	0

AED

AED equipment is listed per unit or vehicle. PSP equipment requirements apply to REMSA authorized PSP providers.

AED	Light Response			First Response			Ground Transport			Air	
	EMT	AEMT	PM	PSP	EMT	AEMT	PM	EMT	AEMT	PM	PM
AED with Cables, Battery(ies), and Supplies	1	1	1	1 EMSC	1 EMSC	1 EMSC	0	1 EMSC	1 EMSC	0	0
Adult AED Pads	2	2	2	2	2	2	0	2	2	0	0
Pediatric AED Pads (or Pediatric Capability with Adult Pads)	0	0	0	1 EMSC	1 EMSC	1 EMSC	0	2 EMSC	2 EMSC	0	0
Disposable Prep Razor	1	1	1	1	1	1	0	1	1	0	0

Resuscitation

Resuscitation equipment is listed per unit or vehicle.

Resuscitation	Light Response			First Response			Ground Transport			Air	
	EMT	AEMT	PM	PSP	EMT	AEMT	PM	EMT	AEMT	PM	PM
Mechanical CPR Device with Supplies	0	0	0	X	0	0	0	0	0	0	0

ECG

ECG equipment is listed per unit or vehicle.

ECG	Light Response			First Response			Ground Transport			Air	
	EMT	AEMT	PM	PSP	EMT	AEMT	PM	EMT	AEMT	PM	PM
ECG Monitor with: Biphasic Defibrillation Cardioversion 12-Lead Acquisition Waveform Capnography Transcutaneous Pacing Cables, Battery(ies), and Supplies	X	X	0	X	X	X	1 EMSC	X	X	1 EMSC	1
12-Lead Transmission <i>All monitors</i>	X	X	0	X	X	X	0	X	X	1 EMSC	0
12-Lead Transmission <i>If purchased after April 1, 2013</i>	X	X	0	X	X	X	1 EMSC	X	X	1 EMSC	0
Real-time CPR Feedback <i>If purchased after April 1, 2014</i>	X	X	0	X	X	X	1 EMSC	X	X	1 EMSC	0
Automated Blood Pressure with Cables, Battery(ies), and Supplies	0	0	0	X	0	0	0	0	0	0	0

Adult Defibrillation Pad Set	X	X	0	X	X	X	2	X	X	2	2
Pediatric Defibrillation Pad Set	X	X	0	X	X	X	1 EMSC	X	X	1 EMSC	1
Adult ECG Electrodes	X	X	0	X	X	X	20	X	X	20	20
Pediatric ECG Electrodes	X	X	0	X	X	X	8 EMSC	X	X	8 EMSC	8
Disposable Prep Razor	0	0	0	0	0	0	1	0	0	1	1
Surgical Hair Clipper with Charger, and Supplies	X	X	0	X	X	X	0	X	X	0	0
Tincture of Benzoin Swabsticks	X	X	0	X	X	X	1	X	X	1	0

Oxygen

Oxygen equipment is listed per unit or vehicle. PSP equipment requirements apply to REMSA authorized PSP providers. Required oxygen must be carried in sufficient amounts:

Portable Oxygen

O₂ for at least 20 minutes @ 10 LPM, approximately:

- D Tank @ 1450 PSI
- Jumbo-D Tank @ 1000 PSI
- E Tank @ 925 PSI

Mounted Oxygen

O₂ for at least 60 minutes @ 10 LPM, approximately:

- M Tank @ 600 PSI
- G Tank @ 450 PSI
- H Tank @ 400 PSI

Oxygen	Light Response			First Response			Ground Transport			Air	
	EMT	AEMT	PM	PSP	EMT	AEMT	PM	EMT	AEMT	PM	PM
Portable O ₂ System with: Oxygen Key Liter Flow Regulator Diameter Index Safety System Male (DISS-M) Connector	0	0	0	1	1	1	1	1 CHP	1 CHP	1 CHP	1
Spare Portable O ₂ Tank	0	0	0	1	1	1	1	0	0	0	0
Wall Mount O ₂ Regulator	0	0	0	0	0	0	0	2	2	2	1
Mounted Main O ₂ Tank	0	0	0	0	0	0	0	1	1	1	1
O ₂ Supply Hoses, Adaptors and Connectors	0	0	0	0	0	0	0	0	0	0	0
Infant Non-Rebreather (NRB) O ₂ Mask	0	0	0	0	0	0	0	1 CHP	1 CHP	1 CHP	1
Pediatric Non-Rebreather (NRB) O ₂ Mask	0	0	0	1 EMSC	1 EMSC	1 EMSC	1 EMSC	2 CHP	2 CHP	2 CHP	2
Adult Non-Rebreather (NRB) O ₂ Mask	0	0	0	1 EMSC	1 EMSC	1 EMSC	1 EMSC	2 CHP	2 CHP	2 CHP	2
Infant Nasal Cannula	0	0	0	0	0	0	0	0	0	0	0
Pediatric Nasal Cannula	0	0	0	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1
Adult Nasal Cannula	0	0	0	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1

Wound Care

Wound care equipment is listed per unit or vehicle. PSP equipment requirements apply to REMSA authorized PSP Providers. REMSA approved tourniquets include those devices recommended by the Co-TCCC, and the SWAT-T.

Wound Care	Light Response			First Response			Ground Transport			Air	
	EMT	AEMT	PM	PSP	EMT	AEMT	PM	EMT	AEMT	PM	PM
3X3 Sterile Gauze Sponge	0	0	0	0	0	0	0	4 CHP	4 CHP	4 CHP	0
4X4 Sterile Gauze Sponge	6	6	6	12	12	12	12	12 CHP	12 CHP	12 CHP	12
Gauze Sponge	0	0	0	0	0	0	0	0	0	0	0
Rigid Eye Shield (Example)	0	0	0	2	2	2	2	2	2	2	0
Eye Pad	0	0	0	0	0	0	0	0	0	0	0
Abdominal Pad	0	0	0	3	3	3	3	3	3	3	0
Trauma Dressing	4	4	4	2	2	2	2	2 CHP	2 CHP	2 CHP	2
Occlusive Dressing	2	2	2	2	2	2	2	2	2	2	2
Roller Gauze Bandage	2	2	2	6	6	6	6	6 CHP	6 CHP	6 CHP	6
Triangular Bandage	2	2	2	2	2	2	2	2	2	2	0
Hemostatic Dressing (EMSA approved only)	0	0	0	0	0	0	0	0	0	0	0
Combat-Application-Tourniquet (C-A-T) [®]	2	2	2	2	2	2	2	2	2	2	1
Tourniquet	0	0	0	0	0	0	0	0	0	0	0
Non-Adherent Dressing	0	0	0	0	0	0	0	0	0	0	0
Self-Adherent Wrap	2	2	2	0	0	0	0	0	0	0	0
Elastic Wrap	0	0	0	0	0	0	0	0	0	0	0
Transpore™ Tape	1	1	1	2	2	2	2	2	2	2	2
Cloth Tape	2	2	2	2	2	2	2	2 CHP	2 CHP	2 CHP	2
Silk Tape	0	0	0	0	0	0	0	0	0	0	0
Disposable Cold Pack	3	3	3	2	2	2	2	6	6	6	2
Sterile Burn Sheet	2	2	2	2	2	2	2	2	2	2	2
1 Liter Normal Saline for Irrigation	0	0	0	2	2	1	1	2 CHP	2 CHP	2 CHP	0

Eye Wash, Bottle	1	1	1	0	0	0	0	0	0	0	0
Disposable OB Kit with Receiving Blanket and Head Cover	0	0	0	1 EMSC	1 EMSC	1 EMSC	1 EMSC	1 CHP	1 CHP	1 CHP	1

Vascular Access

Vascular access equipment is listed per unit or vehicle.

Vascular Access	Light Response			First Response				Ground Transport			Air
	EMT	AEMT	PM	PSP	EMT	AEMT	PM	EMT	AEMT	PM	PM
Constricting Band	X	2	2	X	X	2	2	X	2	2	2
IV Start Kit	X	0	0	X	X	0	0	X	0	0	0
Adhesive Band-Aid	0	0	0	3	3	3	3	3	3	3	3
IV Stabilization Dressing	X	2	2	X	X	0	0	X	0	0	0
IV Stabilization Splint	X	0	0	X	X	0	0	X	0	0	0
Alcohol Swab	X	6	6	X	X	12	12	X	12	12	12
Povidone Iodine Swab	X	4	4	X	X	4	4	X	4	4	4
ChloroPrep Swab	X	0	0	X	X	0	0	X	0	0	0
24g IV Catheter	X	0	0	X	X	2 EMSC	2 EMSC	X	2 EMSC	2 EMSC	2
22g IV Catheter	X	0	0	X	X	2 EMSC	2 EMSC	X	2 EMSC	2 EMSC	2
20g IV Catheter	X	2	2	X	X	2 EMSC	2 EMSC	X	2 EMSC	2 EMSC	2
18g IV Catheter	X	2	2	X	X	2 EMSC	2 EMSC	X	2 EMSC	2 EMSC	2
16g IV Catheter	X	2	2	X	X	2	2	X	2	2	2
14g IV Catheter	X	2	2	X	X	2	2	X	2	2	2
Powered IO Device with Pediatric Capability	X	0	0	X	X	1 EMSC	1 EMSC	X	1 EMSC	1 EMSC	1
Powered IO Device with Adult Capability	X	X	0	X	X	X	1	X	X	1	1
EZ-IO Power Driver	X	0	0	X	X	0	0	X	0	0	0
EZ-IO 15g / 15 mm Pink Needle Set	X	0	0	X	X	0	0	X	0	0	0
EZ-IO 15g / 25 mm Blue Needle Set	X	0	0	X	X	0	0	X	0	0	0
EZ-IO 15g / 45 mm Yellow Needle Set	X	X	0	X	X	X	0	X	X	0	0
B.I.G. 18g Red Pediatric IO Device	X	0	0	X	X	0	0	X	0	0	0
B.I.G. 15g Blue Adult IO Device	X	X	0	X	X	X	0	X	X	0	0

Blood Collection Needle	X	0	0	X	X	0	0	X	0	0	0
Blood Collection Needle Holder	X	0	0	X	X	0	0	X	0	0	0
Blood Tubes	X	0	0	X	X	0	0	X	0	0	0
Bio-Hazard Lab Bag	X	0	0	X	X	0	0	X	0	0	0

Medication Administration

Medication administration equipment is listed per unit or vehicle.

Medication Administration	Light Response			First Response				Ground Transport			Air
	EMT	AEMT	PM	PSP	EMT	AEMT	PM	EMT	AEMT	PM	PM
Hand Held Nebulizer with Mouthpiece, Reservoir, and Supply Tubing	X	0	0	X	X	2	2	X	2	2	1
Pediatric Nebulizer Mask	X	0	0	X	X	0	0	X	0	0	0
Adult Nebulizer Mask	X	0	0	X	X	1	1	X	1	1	1
Nebulizer Tee with Adaptors	X	0	0	X	X	1	1	X	1	1	1
Holding Chamber for MDI	X	0	0	X	X	0	0	X	0	0	0
MAD® Nasal-Mucosal Atomization Device	X	X	0	X	X	X	2	X	X	2	2
18 - 19 g Hypodermic Needle	X	4	4	X	X	0	0	X	0	0	0
18 - 19 g Filter Needle	X	0	0	X	X	0	0	X	0	0	0
Blunt IV Injection Cannula for Needleless System	X	0	0	X	X	0	0	X	0	0	0
21 g X 1 - 1.5" Hypodermic Needle	X	0	0	X	X	2	2	X	2	2	2
23 g X 1 - 1.5" Hypodermic Needle	X	0	0	X	X	2 EMSC	2 EMSC	X	2 EMSC	2 EMSC	2
25 g X 1" Hypodermic Needle	X	2	2	X	X	2 EMSC	2 EMSC	X	2 EMSC	2 EMSC	2
1 mL TB Syringe	X	2	2	X	X	2 EMSC	2 EMSC	X	2 EMSC	2 EMSC	2
3 mL Syringe	X	0	0	X	X	2 EMSC	2 EMSC	X	2 EMSC	2 EMSC	2
5 mL Syringe	X	0	0	X	X	2	2	X	2	2	2
10 mL Syringe	X	2	2	X	X	2	3	X	2	3	3
20 mL Syringe	X	0	0	X	X	0	1	X	0	1	1
30 mL Syringe	X	0	0	X	X	0	0	X	0	0	0
60 mL Syringe	X	0	0	X	X	0	0	X	0	0	0
Carpject® Holder	X	0	0	X	X	0	0	X	0	0	0

Saline Lock Extension Set	X	0	0	X	X	2	2	X	2	2	2
Three Way Stopcock	X	0	0	X	X	0	0	X	0	0	0
Luer Lock Adaptor	X	0	0	X	X	0	0	X	0	0	0
Volume Control Chamber IV Set	X	0	0	X	X	1	1	X	1	1	1
60 gtt / mL IV Set	X	0	0	X	X	0	0	X	0	0	0
10 gtt / mL IV Set	X	2	2	X	X	2	2	X	2	2	1
Pressure Infusion Bag	X	0	0	X	X	1	1	X	1	1	1
IV Warmer with Supplies	X	0	0	X	X	0	0	X	0	0	1
Narcotic Storage	X	X	1	X	X	X	1	X	X	1	1

Transportation

Transportation equipment is listed per vehicle. Restraints must be constructed of neoprene over nylon webbing with double hook and loop closure.

Transportation	Light Response			First Response			Ground Transport			Air	
	EMT	AEMT	PM	PSP	EMT	AEMT	PM	EMT	AEMT	PM	PM
Ambulance Cot with 8+ Point Seat Belts	0	0	0	X	X	X	X	1 CHP	1 CHP	1 CHP	1
Cot Securing System	0	0	0	X	X	X	X	1 CHP	1 CHP	1 CHP	1
Commercial Child Restraint System	0	0	0	X	X	X	X	1	1	1	1
Collapsible (Folding) Stretcher	0	0	0	X	0	0	0	1 CHP	1 CHP	1 CHP	0
Stair Chair	0	0	0	X	0	0	0	0	0	0	0
Rescue Basket / Litter / Stretcher / Similar Device	0	0	0	X	0	0	0	0	0	0	0
Wrist Restraint	0	0	0	X	0	0	0	2 CHP	2 CHP	2 CHP	2
Ankle Restraint	0	0	0	X	0	0	0	2 CHP	2 CHP	2 CHP	2
Spit Sock (Patient Hood)	0	0	0	X	0	0	0	1	1	1	0

Waste Disposal

Waste disposal equipment is listed per unit or vehicle. PSP equipment requirements apply to REMSA authorized PSP Providers.

Waste Disposal	Light Response			First Response			Ground Transport			Air	
	EMT	AEMT	PM	PSP	EMT	AEMT	PM	EMT	AEMT	PM	PM
Mounted Sharps Container	0	0	0	0	0	0	0	1	1	1	1

Portable Sharps Container	1	1	1	1	1	1	1	1	1	1	1
Covered Waste Container	0	0	0	0	0	0	0	1 CHP	1 CHP	1 CHP	0
Waste Bag	0	0	0	0	0	0	0	0	0	0	0
Biohazard Bag	2	2	2	2	2	2	2	2	2	2	1
Emesis Basin	0	0	0	0	0	0	0	1 CHP	1 CHP	1 CHP	0
Bed Pan	0	0	0	0	0	0	0	1 CHP	1 CHP	1 CHP	0
Urinal	0	0	0	0	0	0	0	1 CHP	1 CHP	1 CHP	0

Linen

Linen is listed per unit or vehicle. PSP equipment requirements apply to REMSA authorized PSP Providers.

Linen	Light Response				First Response			Ground Transport			Air
	EMT	AEMT	PM	PSP	EMT	AEMT	PM	EMT	AEMT	PM	PM
Blanket	0	0	0	0	0	0	0	2 CHP	2 CHP	2 CHP	1
Emergency Blanket	2	2	2	2	2	2	2	0	0	0	0
Towel	0	0	0	0	0	0	0	2 CHP	2 CHP	2 CHP	0
Stretcher Sheet	0	0	0	0	0	0	0	2 CHP	2 CHP	2 CHP	0
Pillow	0	0	0	0	0	0	0	2 CHP	2 CHP	2 CHP	0
Pillow Case	0	0	0	0	0	0	0	2 CHP	2 CHP	2 CHP	0

Documentation

Documentation equipment is listed per unit or vehicle. PSP equipment requirements apply to REMSA authorized PSP providers.

Documentation	Light Response				First Response			Ground Transport			Air
	EMT	AEMT	PM	PSP	EMT	AEMT	PM	EMT	AEMT	PM	PM
Mobile ePCR System with: Portable Touchscreen Computer Magnetic Strip / Barcode Reader ECG Monitor Connectivity Mobile Internet Access	0	0	0	0	0	0	0	0	0	0	0
County Contracted ePCR System <i>Required beginning January 1, 2017</i>	1	1	1	1	1	1	1	1	1	1	1
Clipboard	0	0	0	1	1	1	1	1	1	1	1
Pen	1	1	1	1	1	1	1	1	1	1	1

Paper Patient Information Worksheets* (<u>not</u> a substitute for ePCR)	0	0	0	0	0	0	0	0	0	0	0
Paper Release Forms	3	3	3	5	5	5	5	5	5	5	5
Pencil	1	1	1	0	0	0	0	0	0	0	0
Writing Pad	1	1	1	0	0	0	0	0	0	0	0
Light Response Program Inventory Sheet	1	1	1	0	0	0	0	0	0	0	0

Medications

Medications are listed per unit or vehicle. Of the authorized options, the preferred medication is in **bold** print.

Medications	Light Response			First Response			Ground Transport			Air	
	EMT	AEMT	PM	PSP	EMT	AEMT	PM	EMT	AEMT	PM	PM
Act. Charcoal — 50 g / 240 mL Container	X	0	0	X	X	1	1	X	1	1	0
<i>or</i> Act. Charcoal — 25 g / 120 mL Container	X	0	0	X	X	2	2	X	2	2	0
Adenosine — 12 mg / 4 mL Prefilled Syringe or Vial	X	X	0	X	X	X	2	X	X	2	2
<i>or</i> Adenosine — 6 mg / 2 mL Prefilled Syringe or Vial	X	X	0	X	X	X	4	X	X	4	4
Albuterol 0.083% — 2.5 mg / 3 mL Vial	X	0	0	X	X	3	3	X	3	3	3
Albuterol — 90 µg / 1 Dose Metered Dose Inhaler <i>May substitute vials & equipment</i>	X	1	1	X	X	0	0	X	0	0	0
Amiodarone — 150 mg / 3 mL Vial	X	X	2	X	X	X	3	X	X	3	3
<i>or</i> Amiodarone — 900 mg / 18 mL Vial	X	X	1	X	X	X	1	X	X	1	1
Aspirin — 81 mg / 1 Tab. Chewable Tablet in Packet	X	4	4	X	X	8	8	X	8	8	8
<i>or</i> Aspirin — 81 mg / 1 Tab. Multi-dose Chewable Tab. Bottle	X	1	1	X	X	1	1	X	1	1	1
Atropine — 1 mg / 10 mL Prefilled Syringe	X	X	1	X	X	X	1	X	X	1	1
<i>or</i> Atropine — 0.5 mg / 5 mL Prefilled Syringe	X	X	2	X	X	X	2	X	X	2	2
<i>or</i> Atropine — 1 mg / 1 mL Ampule or Vial	X	X	1	X	X	X	1	X	X	1	1
Atropine — 8 mg / 20 mL Vial	X	X	0	X	X	X	1	X	X	1	0
<i>or</i> Atropine — 1 mg / 1 mL Ampule or Vial	X	X	0	X	X	X	8	X	X	8	0
Calcium Chlor. 10% — 1 g / 10 mL Prefilled Syringe	X	X	0	X	X	X	1	X	X	1	1

Dextrose 10% — 25 g / 250 mL IV Bag	X	1	1	X	X	2	2	X	2	2	2
<i>or</i> Dextrose 50% — 25 g / 50 mL Prefilled Syringe or Vial	X	1	1	X	X	2	2	X	2	2	2
<i>or</i> Dextrose 25% — 2.5 g / 10 mL Prefilled Syringe	X	10	10	X	X	20	20	X	20	20	20
<i>or</i> Dextrose 10% — 1 g / 10 mL Prefilled Syringe	X	25	25	X	X	50	50	X	50	50	50
Diphenhydramine — 50 mg / 1 mL Vial, or Carpuject®	X	X	1	X	X	X	1	X	X	1	1
Left Blank	X	X	X	X	X	X	X	X	X	X	X
Epi. 1:1,000 — 1 mg / 1 mL Ampule	X	1	1	X	X	1	1	X	1	1	1
<i>or</i> Epi. 1:1,000 — 30 mg / 30 mL Vial	X	1	1	X	X	1	1	X	1	1	1
Epi. 1:10,000 — 1 mg / 10 mL Prefilled Syringe	X	X	2	X	X	X	3	X	X	3	3
<i>or</i> Epi. 1:1,000 — 1 mg / 1 mL Ampule	X	X	2	X	X	X	3	X	X	3	3
<i>or</i> Epi. 1:1,000 — 30 mg / 30 mL Vial	X	X	1	X	X	X	1	X	X	1	1
Glucagon — 1 mg / 1 mL Vial of Powder + Vial of Diluent	X	1	1	X	X	1	1	X	1	1	1
Glucose Gel — 1 Container	1	1	1	X	1	1	1	1	1	1	0
Ipratropium Br.— 0.5 mg / 2.5 mL Vial	X	X	0	X	X	X	1	X	X	1	1
Lidocaine 2% — 100 mg / 5 mL Prefilled Syringe	X	X	0	X	X	X	1	X	X	1	1
<i>or</i> Lidocaine 2% — 400 mg / 20 mL Vial	X	X	0	X	X	X	1	X	X	1	1
Magnesium Sulfate — 5 g / 10 mL Prefilled Syringe or Vial	X	X	0	X	X	X	1	X	X	1	1
<i>or</i> Magnesium Sulfate — 1 g / 2 mL Vial	X	X	0	X	X	X	5	X	X	5	5
<i>or</i> Magnesium Sulfate - 4 g / 100 mL IV Bag	X	X	0	X	X	X	1	X	X	1	1
Naloxone — 2 mg / 2 mL Prefilled Syringe or Vial	X	1	1	X	X	4	4	X	4	4	1
<i>or</i> Naloxone — 4 mg / 10 mL Vial	X	1	1	X	X	2	2	X	2	2	1
<i>or</i> Naloxone — 0.4 mg / 1 mL Prefilled Syringe, Vial or Carpuject®	X	5	5	X	X	20	20	X	20	20	5
Nitroglycerin — 0.4 mg / 1 Dose Multi-dose Spray or Bottle of Tab.	X	1	1	X	X	1	1	X	1	1	1
Nitro. Paste 2% — 1 g / 1 Inch Packet with Paper Applicators	X	X	0	X	X	X	2	X	X	2	0
<i>or</i> Nitro. Paste 2% — 30 g / 1 Tube with Paper Applicators	X	X	0	X	X	X	1	X	X	1	0

<i>or</i> Nitro. Paste 2% — 60 g / 1 Tube with Paper Applicators	X	X	0	X	X	X	1	X	X	1	0
Normal Saline 0.9% — 1000 mL IV Bag	X	1	1	X	X	2	2	X	2	2	2
<i>or</i> Normal Saline 0.9% — 500 mL IV Bag	X	2	2	X	X	4	4	X	4	4	4
<i>or</i> Normal Saline 0.9% — 250 mL IV Bag	X	4	4	X	X	8	8	X	8	8	8
Normal Saline 0.9% — 50 mL IV Bag	X	X	0	X	X	X	1	X	X	1	1
Normal Saline 0.9% — 10 mL Prefilled Syringe or Vial	X	X	0	X	X	X	2	X	X	2	2
Ondansetron — 4 mg / 2 mL Prefilled Syringe or Vial	X	X	0	X	X	X	1	X	X	1	1
<i>or</i> Ondansetron — 40 mg / 20 mL Vial	X	X	0	X	X	X	1	X	X	1	1
Ondansetron — 4 mg / 1 Tab. Oral Disintegrating Tablet	X	X	0	X	X	X	1	X	X	1	0
So. Bicarb. 8.4% - 50 mEq / 50 mL Prefilled Syringe or Vial	X	X	0	X	X	X	1	X	X	1	1
<i>or</i> So. Bicarb. 8.4% - 10 mEq / 10 mL Prefilled Syringe or Vial	X	X	0	X	X	X	5	X	X	5	5

Controlled Substances

Controlled substances are listed per unit or vehicle. Of the authorized options, the preferred medication is in **bold** print.

Controlled Substances	Light Response			First Response			Ground Transport			Air	
	EMT	AEMT	PM	PSP	EMT	AEMT	PM	EMT	AEMT	PM	PM
Fentanyl — 100 µg / 2 mL Ampule, Vial, or Carpuject®	X	X	1	X	X	X	1	X	X	1	1
Midazolam — 5 mg / 1 mL Ampule, Vial or Carpuject®	X	X	2	X	X	X	2	X	X	2	2
<i>or</i> Midazolam — 10 mg / 2 mL Ampule, Vial, or Carpuject®	X	X	1	X	X	X	1	X	X	1	1
<i>or</i> Midazolam — 5 mg / 5 mL Ampule or Vial	X	X	2	X	X	X	2	X	X	2	2
<i>or</i> Lorazepam — 4 mg / 1 mL Ampule, Vial, or Carpuject®	X	X	2	X	X	X	2	X	X	2	2
<i>or</i> Lorazepam — 2 mg / 1 mL Ampule, Vial, or Carpuject®	X	X	4	X	X	X	4	X	X	4	4
<i>or</i> Diazepam — 10 mg / 2 mL Ampule, Vial, or Carpuject®	X	X	2	X	X	X	2	X	X	2	2
Morphine Sulfate — 10 mg / 1 mL Ampule, Vial or Carpuject®	X	X	1	X	X	X	1	X	X	1	1
<i>or</i> Morphine Sulfate - 10 mg / 10 mL Ampule or Vial	X	X	1	X	X	X	1	X	X	1	1

CDC Medications

CDC medications are listed per unit or vehicle. Of the authorized options, the preferred medication is in **bold** print. Note that these medications are for administration to patients; and that these same medications when listed under Personal Protective Equipment are for personal use.

CDC Medications	Light Response			First Response			Ground Transport			Air	
	EMT	AEMT	PM	PSP	EMT	AEMT	PM	EMT	AEMT	PM	PM
DuoDote Nerve Agent Antidote Kit	0	0	0	X	0	0	0	0	0	0	0
<i>or Mark I Nerve Agent Antidote Kit</i>	0	0	0	X	0	0	0	0	0	0	0

Cardiac Monitor Specification

Attributes/capabilities for Cardiac Monitor, Pacemaker, Defibrillator

Cardiac Monitor/Defibrillator/Pacemakers shall adhere to the below specifications and meet all current applicable and relevant REMSA policies/ protocols, guidelines and standards, including: American Heart Association (A.H.A.), American National Standards Institute (A.N.S.I.), American Society for Testing and Materials (A.S.T.M.), Association for the Advancement of Medical Instrumentation (A.A.M.I.), E.C.R.I. Institute, Federal Communications Commission (F.C.C.), Food and Drug Administration (F.D.A.).Health Insurance Portability and Accountability Act (H.I.P.A.A.), and National Fire Protection Association (N.F.P.A.).

Physical Attributes
Six (6) foot lead set with removable precordial lead connection
Multifunction cable with hands-free MFP capability
CPR diagnostic qualitative and quantitative feedback, and reporting capability (*not optional – additional specification below)
A/C power adapter/battery charger - Full functionality should be present while device is functioning with A/C power
Lithium-ion batteries, two/device, must be smart batteries lasting minimum of 3 hours each
Battery charging device, minimum of 2 bay/bank charger. - Charging support systems must recalibrate and test batteries in addition to charging.
Minimum one (1)-year EMS warranty
Biphasic waveform with hands-free debrillation functionality with adult and pediatric capability. Energy setting options must be compatible with applicable REMSA protocols.
Functionality to operate in Automated External Defibrillator or Semi-Automated External defibrillator mode
Functionality to provide synchronized cardioversion at multiple age-appropriate energy levels. Energy setting options must be compatible with applicable REMSA protocols.
Adjustable and controllable amperage and rate for transthoracic pacing with adult and pediatric capability
Ability to operate in fixed, demand, and overdrive modes
Capability to detect and indicate presence of internal pacemaker
Capability to print field user machine test/internal diagnostic test results
Display, select and/or cascade multiple waveforms simultaneously (e.g.: paddles/MFP, Lead I, Lead II, Lead III, capnography, SpO2 Pleth – all are required as options for display)
Programmable audio and visual alert systems for fatal arrhythmias, VF/VT at a minimum
Separate programmable alerts for biometric parameters of NiBP, heart rate, respiratory rate, etCO2, SpO2
Record, display, and import into the REMSA ePCR system: the etCO2 value – waveform and quantitative measure. In-line and Side-Stream capabilities are required, capability for use on the intubated and non-intubated patient.

Record, display, and import into the REMSA ePCR system: SpO2 value – waveform and quantitative measure. All patient age ranges must be accommodated in disposable/hard wired probes, and diagnostic feedback
Record, display, and import into the REMSA ePCR system: Non-invasive blood pressure measure accounting for vibration resistance both at vehicle rest and vehicle motion. All patient age ranges must be accommodated in disposable/hard wired cuffs. Cuff sizes must meet REMSA Policy for Drug and Equipment List. (*NIBP is an optional component, If purchased, specification must be met)
Calculate and display Mean Arterial Pressure reading
Record, display, and import temperature* readings into the REMSA ePCR system. Device must have a minimum of one (1) temperature channel, and must be able to monitor skin and/or ambient temperature, esophageal temperature, and rectal temperature. o Temperature must measure from 25°C to 45°C at minimum o (*Temperature monitoring is an optional component, if purchased, specification above must be met.)
Record, display, and import into the REMSA ePCR system: Non-invasive carbon monoxide* waveform and quantitative measure (spCO). o Display, print, and mark in events and/or code summary carbon monoxide waveforms and quantitative values. Probe for measure shall cover adult and pediatric patients. Precision and accuracy must be at least within three (3) digits (+/-) when spCO is 0-10%. o (*Carbon monoxide(spCO) monitoring is an optional component, if purchased, specification above must be met)
Record, display, and import into the REMSA ePCR system: non-invasive methemoglobin* quantitative levels (spMet). o Display, print, and mark in events and/or code summary methemoglobin quantitative value. Probe for measurement shall cover adult and pediatric patients. Precision and accuracy must be at least within one (1) digit (+/-) when spMet is 0-10%. o (*Methemoglobin (spMet) level monitoring is an optional component, if purchased, specification above must be met)
Physical Attributes continued
Record, print and have capability to import customizable Code Summary records from individual patient contacts into REMSA ePCR system.
Display that is color capable, subject to wide angle viewing, and adaptable to changes in brightness.
Customizable audio/visual alerts (configurable without vendor involvement) of biometric parameters (at minimum NiBP, HR, RR)
Capability for users to adjust automatically performed vital sign intervals
Capability to mark events in Code Summary recording
Patient biometric trending is automatically engaged with device use, and can be viewed on screen and/or printed
Safe user-driven discharge of electricity, outside of therapeutic energy delivery
Audio/visual alerts for detached leads
Device vendor must facilitate data integrations with REMSA ePCR vendor
Device, including any add-on features must be upgradeable as technological advances and research permit. Including but not limited to: CPR qualitative and quantitative feedback, 12 lead ECG algorithms, capnography diagnostics, temperature monitoring.
12 Lead Functionalities
Acquire, interpret, transmit and print diagnostic quality 12 lead ECG's 1. The unit shall capable of diagnostic 12-lead monitoring in leads I, II, III, aVR, aVL, aVF, V1, V2, V3, V4, V5 and V6 2. Vendor must provide data regarding the maintenance/update of specificity and sensitivity of algorithms utilized for STEMI interpretation. Data must be provided annually and at any maintenance or update periods. 3. Transmitted data shall be secured in a HIPAA compliant manner, and meet current applicable REMSA Information Security policies/standards
12 lead ECG print capability shall include configuration to print interval measurements, interpretation, axes measurements, and clinician entered patient demographic variables of name, age and gender at minimum
Continually monitor and trend 12 lead ECG when leads are attached, without requirement of obtaining a specific 12 lead ECG
Acquired 12 lead ECG's must be chronologically and numerically ordered as obtained during individual patient contact (serial 12 lead ECG capability)
Device must be able to transmit 12 lead ECG's, to any/all REMSA designated SRC (at minimum). 1. ECG transmission shall generate electronic notification, which provides an alert to the facility, and can include multiple facility designated personnel. 2. Reports regarding 12 lead ECG transmissions – success, failure, aggregate frequency, shall be available to the service provider, SRC, and REMSA. 3. ECG transmission shall be field- user feasible with mobile gateways, hot spots, cellular/data services or the like. 4. ECG transmission must not require any software/server purchase, or proprietary service to view, distribute.

Cardiopulmonary Resuscitation (CPR) diagnostics/feedback device must:
Measure/gauge depth, rate and chest recoil of each compression/cycle of compressions during active CPR, in both static patient situations and dynamic movement of the patient
Provide for synchronous and asynchronous CPR qualitative and quantitative feedback
Provide audio and/or visual feedback to correct cadence, depth of compressions, and chest recoil/release , whether patient is static or dynamically moving
Provide an inactivity timer, indicating time duration of no chest compressions
Provide real time visual and auditory feedback to clinicians
CPR diagnostics/feedback must provide retrospective case by case, and aggregate feedback to EMS Providers, and REMSA.
Be able to transmit from device via cable or WIFI connection, into reportable software or database accessible by individual EMS Providers and REMSA.
Be stored by patient encounters, and provide a minimum of two unique identifiers (such as date of service, time of service, patient demographics or combinations to enable accuracy in data collection and reporting).
As able with ePCR technology, CPR diagnostics/feedback/summary must import into the REMSA ePCR system.
Data Integration and Management:
Device automatically stores patient information on internal memory per device application. Data stored must include at least two unique identifiers (incident number, date of service, time of service, patient information or combination), clinician entered events, therapies delivered.
Archived patient records must be able to be transmitted, printed and deleted by staff without vendor involvement.
Device must provide for the option of a USB cell modem for the wireless transmission of biometric parameters, CPR diagnostic feedback and 12 lead ECG.
Data Integration and Management continued:
Device must be capable of transferring data (including 12 Lead ECG, historical patient trends, event/code summary, CPR feedback and biometric parameters) into the REMSA ePCR system utilizing a directly connected cable or WIFI connection.
1. All applicable REMSA Information Security policies and procedures must be followed during data transmissions, imports or other sharing methodologies.

DEFINITIONS

Please refer to the following sources for standard definitions:

California Code of Regulations, Title 22, Division 9, Prehospital Emergency Medical Services. (2018, January 30). Retrieved February 1, 2018, from <http://www.emsa.ca.gov/Media/Default/PDF/2014%20Regulations%20Book.pdf#Pagemode=Bookmarks&View=FitV&Page=1>

California EMS authority, Prehospital EMS Aircraft Guidelines, Definitions. (2010, December 1). Retrieved March 19, 2015, from <http://www.emsa.ca.gov/Media/Default/PDF/EMSA144.pdf#Pagemode=Bookmarks&View=FitV&Page=6>

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REFERENCES

[California Health and Safety Code - Division 2.5: Emergency Medical Services](#)

[California Code of Regulations, Title 22. Social Security, Division 9. Prehospital Emergency Medical Services](#)

[California Code of Regulations, Title 13. Motor Vehicles, Section 1103.2](#)

[California Vehicle Code Section 2418.5 Resuscitator Requirements for Ambulances](#)

[California Code of Regulations, Title 8. Industrial Relations](#)

[Occupational Safety and Health Administration \(OSHA\), Occupational Safety and Health Standards, Standard 1910](#)

[California Fire Service and Rescue Emergency Mutual Aid System, Mutual Aid Plan \(2-12\)](#)

[American National Standards Institute \(ANSI\)](#)

[British Standards Institution \(BSI\)](#)
[Canadian Standards Association \(CSA\)](#)
[Commission on Accreditation of Medical Transport Services \(CAMTS\)](#)
[National Fire Protection Association \(NFPA\)](#)
[National Institute for Occupational Safety and Health \(NIOSH\)](#)
[EMSA #216: Minimum Personal Protective Equipment \(PPE\)](#)
[Extending the Shelf Life of Critical Chemical Biological, Nuclear and Radiological \(CBRN\) Medical Materiel Using the FDA/DOD Shelf Life Extension Program](#)
[EMSC Guidelines for Equipment on Ambulances](#)
[ICS Position Manual, Fireline Emergency Medical Technician Paramedic \[FEMP ICS 223-11\]](#)
[California Incident Command Certification System \(CICCS\) Qualification Guide](#)

Cite references using the American Psychological Association (APA) format as below. You may find <http://www.citationmachine.net/apa/cite-a-website> useful.

California Code of Regulations, Title 22, Division 9, Prehospital Emergency Medical Services. (2017, July 1). Retrieved 1 February 2018, from <https://emsa.ca.gov/regulations/>

California Health and Safety Code, Division 2.5, Emergency Medical Services System and the Prehospital Emergency Medical Care Personnel Act, last updated January 2016. (2016, January 30). Retrieved 1 February 2018, from <https://emsa.ca.gov/wp-content/uploads/sites/47/2017/07/2016-Statute-Book.pdf>

Riverside County Ordinance 756, Regulations for ALS Ambulance, Air Ambulance, BLS Ambulance, and Critical Care Transport Providers. (1995, September 14). Retrieved 1 February, 2018, from <http://www.rivcocob.org/ords/700/756.htm>