



**TITLE: EMS RESPONSE VEHICLE MEDICATION AND EQUIPMENT**      EMS Policy No. **4101**

**PURPOSE:**

The purpose of this policy is to standardize and establish par levels for the medication and equipment available on EMS response vehicles in San Joaquin County.

**AUTHORITY:**

Health and Safety Code, Division 2.5, Sections 1797.197, 1797.197a, 1797.206, 1797.220, 1798; California Code of Regulations, Title 22, Division 9, Chapter 2 Section 100063, 100063.1, 100064, and Chapter 4 Sections 100145, 100146, 100168, 100170.

**DEFINITIONS:**

- A. "Advanced Life Support" or "ALS" means special services designed to provide definitive prehospital emergency medical care, including, but not limited to, cardiopulmonary resuscitation, cardiac monitoring, cardiac defibrillation, advanced airway management, intravenous therapy, administration of specified drugs and other medicinal preparations, and other specified techniques and procedures administered by authorized personnel under the direct supervision of a base hospital as part of the organized EMS system at the scene of an emergency, during transport to an acute care hospital, during inter-facility transfer, and while in the emergency department of an acute care hospital until responsibility is assumed by the emergency or other medical staff of that hospital.
- B. "AMB" means ambulance.
- C. "Basic life support" or "BLS" means emergency first aid and cardiopulmonary resuscitation procedures which, as a minimum, include recognizing respiratory and cardiac arrest and starting the proper application of cardiopulmonary resuscitation to maintain life without invasive techniques until the patient may be transported or until advanced life support is available.
- D. "EMS Service Providers" means those ambulance services, fire departments, fire districts or other entities operating within the organized EMS system.
- E. "EMS Response Vehicle" means all ambulances and any fire apparatus or other motor vehicle used to respond to EMS requests for service.
- F. "EMT Enhanced Skills" means those items specified in EMS Policy No. 2360, EMT Scope of Practice as EMT Enhanced Skills.
- G. "NA" means not authorized.
- H. "NR" means not required.
- I. "NT" means a non-transport EMS response vehicle.
- J. "Par Level" means the minimum quantity of an item stocked at the beginning of a shift and replenished during the shift if below the par level.
- K. "Organized EMS System" means those entities included in the San Joaquin



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County EMS Agency's EMS Plan as submitted to the Emergency Medical Services Authority pursuant to Health and Safety Code § 1797.254.

- L. "SJCEMSA" means the San Joaquin County Emergency Medical Services (EMS) Agency, which is the designated local emergency medical services agency for San Joaquin County.

**POLICY:**

It is the policy of SJCEMSA to standardize and require minimum levels of medical equipment and medications for EMS response vehicles working in the San Joaquin County EMS system.

**PROCEDURE:**

- I. EMS Service Providers are required to develop a vehicle inspection procedure to ensure compliance with this policy at the start of each shift including a written record of each daily inspection for each EMS vehicle maintained in an auditable format. Records shall be maintained for a minimum of six months. EMS service providers shall require each attending paramedic or EMT to conduct an inspection of their assigned EMS response vehicle at the beginning of their shift.
- II. The attending paramedic or EMT on each EMS response vehicle is responsible for ensuring that all medications and equipment are present at the beginning of each shift, that all equipment is functioning properly, and that all battery-powered devices are charged.
- III. Medications, supplies, and equipment shall be stored in accordance with the manufacturer's recommendation unless otherwise specified in this policy. The use of expired medications and supplies is prohibited.
- IV. The quantities specified are minimum quantities except for controlled substances which are maximum quantities.
- V. EMS service providers shall have and maintain appropriate state and federal approvals for point of care testing including a waiver form from the Centers for Medicare and Medicaid Services, pursuant to the Clinical Laboratory Improvement Amendments (CLIA), for laboratory devices including testing to measure lab values in the prehospital setting as follows:
  - A. BLS NT and BLS AMB for finger stick glucose.
  - B. ALS NT and ALS AMB for finger stick glucose, capnometry, capnography, and carbon monoxide.

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- VI. EMS service providers that are unable to maintain medication or equipment par levels required in this policy due to ongoing or imminent national medication and equipment shortages shall complete and submit Form 4101A Medication Shortage Mitigation and Response Strategies.
- VII. EMS service providers that request a waiver from medication or equipment par levels of this policy shall complete and submit Form 4101B, Request for Waiver of Requirements.
- VIII. Any substitutions or modifications of this list must be approved by the EMS Medical Director.

Table 1: ALS and BLS Common Equipment and Supplies	Par Level			
	BLS		ALS	
	NT	AMB	NT	AMB
<b>Airway Management</b>				
In ambulance oxygen source, minimum of 500 PSI with a wall mounted regulator	NR	1	NR	1
Portable oxygen - D or E size cylinders, minimum of 200 PSI, with regulator	1	1	1	1
Spare Portable oxygen - D or E size cylinders, minimum of 1800 PSI	1	1	1	1
Wall mount suction device	NR	1	NR	1
Battery powered suction unit	1	1	1	1
Suction catheters with control for each size Fr 6, 8, 10, 12, 14, 18	1	1	1	1
Connecting tubing for suction units	2	2	2	2
Yankauer Tonsil Tip Suction Catheter	2	2	2	2
Disposable bag valve device - adult, with appropriate connector masks	2	2	2	2
Disposable bag valve device – pediatric, with appropriate connector masks for child and infant	1	1	1	1
Tube of water soluble lubricating jelly (or multiple single use packets)	1	1	1	1
Oropharyngeal Airway Kit (adult, child, infant) each size 0 – 9	1	1	1	1
Tongue blade for use in inserting child and infant OPA	1	1	1	1
Nasopharyngeal Airways, each size Fr 20, 24, 28, 32, 36	1	1	1	1
Nasal Cannula, pediatric	1	1	1	2
Nasal Cannula, adult	2	2	3	3
Adult Non-rebreather oxygen mask	2	2	2	3
Pediatric Non-rebreather oxygen mask	2	1	1	2

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Table 1: ALS and BLS Common Equipment and Supplies	Par Level			
	BLS		ALS	
	NT	AMB	NT	AMB
Adult laryngoscope handle with alkaline batteries or 2 disposable handles	NA	NA	1	1
Pediatric laryngoscope handle with alkaline batteries or 2 disposable handles	NA	NA	1	1
Spare alkaline batteries for laryngoscope handle	NA	NA	2	2
Disposable Macintosh laryngeal blades each size: #1, #2, #3, #4	NA	NA	1	1
Disposal Miller laryngeal blades each size: #0, #1, #2, #3, #4	NA	NA	1	1
Magill Forceps – Adult and Pediatric	NA	NA	1	1
Endotracheal tubes each size: 4.0, 4.5, 5.0, 5.5, 6.0, 6.5, 7.0, 7.5, 8.0, 8.5	NA	NA	1	2
ET tube holder	NA	NA	1	2
Disposable endotracheal tube introducers	NA	NA	2	2
Endotracheal tube stylet	NA	NA	1	2
End tidal CO2 device, adult	NA	NA	1	2
End tidal CO2 device, pediatric	NA	NA	1	2
Nebulizer mask	0	0	1	1
Saline humidifier	1	1	1	1
Breath actuated nebulizer	NA	NA	1	2
Needle and catheter for pleural decompression: 10 or 14 gauge 3.25 inch needle (with Betadine swab, tape, and 10 ml syringe)	NA	NA	4	4
Percutaneous Needle Cricothyroidotomy insertion kit, which includes: 10 ml syringe, Translaryngeal jet ventilator device with push-button and high-pressure tubing with locking device (Adult), 10 or 12 gauge needle for adult, and Betadine swab, or Enk Oxygen Flow Modulator set, (Adult), and Betadine swab or kit approved by EMS Medical Director.	NA	NA	1	1
iGel Airway each size 3.0, 4.0, 5.0	NA	NA	2	2
iGel Airway each size 1.0, 1.5, 2.0, 2.5	NA	NA	2	2
Pneumatic Continuous Positive Airway Pressure (CPAP) device	NA	NA	1	NA
Zoll Z series™ ventilator with CPAP and/or BiPAP *Optional for Non- Emergent ALS interfacility transfer ambulance	NA	NA	NA	1
Adult Ventilator Circuits *Optional for Non- Emergent ALS interfacility transfer ambulance	NA	NA	NA	3

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	BLS		ALS	
	NT	AMB	NT	AMB
CPAP mask compatible with Zoll Z series™ ventilator each size large and extra large *Optional for Non- Emergent ALS interfacility transfer ambulance	NA	NA	NA	3
Inline Hepa Filter *Optional for Non- Emergent ALS interfacility transfer ambulance	NA	NA	1	2
<b>Assessment and Treatment</b>				
Stethoscope	1	1	1	2
Penlight	1	1	1	1
Blood pressure cuff: thigh, adult, child, infant	1 ea	1 ea	1 ea	1 ea
Patient thermometer (temporal or noncontact)	1	1	1	1
Pulse oximetry device approved by the Food and Drug Administration (FDA);	1	1	1	1
Blood glucose measuring device approved by the FDA with multiple test strips	NA	NA	1	1
Length based pediatric resuscitation tape	NR	NR	1	1
Cardiac monitor with defibrillation/pacing/12 lead capable	NA	NA	1	1
Pediatric defibrillation equipment	NA	NA	1	1
ECG electrodes all patient sizes	NA	NA	6	9
Automated External Defibrillator – Compliant with the current AHA Guidelines and capable of delivering both adult and pediatric shocks	1	1	NR	NR
AED cables and pads for sizes adult and pediatric	1	1	NR	NR
Piston style mechanical compression device	1	0	1	0
Bandage shears (heavy duty)	1	1	1	2
Rolls of tape, size 1" or 2" or 3" Hypoallergenic (Transpore/paper)	2	2	2	2
Emesis basins	NR	2	NR	2
Bed pan/fracture pan	NR	1	NR	1
Urinal	NR	1	NR	1
OB Kit, which includes: (1) pair of sterile gloves, (1) drape sheet, (2) umbilical clamps, (4) disposal towels, (2) O.B. towelettes, (1) bulb syringe, (2) alcohol preps, (1) O.B. sterile pad (1) plastic bag	1	1	1	1

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Table 1: ALS and BLS Common Equipment and Supplies	Par Level			
	BLS		ALS	
	NT	AMB	NT	AMB
for placenta, (2) twist ties, (1) receiving blanket, (3) gauze sponges, (pk/2)				
Ring Cutter	1	1	1	1
Soft ankle/wrist restraints	0	4	0	4
<b>Trauma</b>				
Board for use in extrication	1	1	1	1
One or more of the following for use in patient movement on scene: collapsible litter, pole-less litter, soft or tarp litter, or stokes litter	1	1	1	1
Scoop stretcher	0	1	0	1
Kendrick Immobilization Device (KED) or similar device approved by the EMS Agency	1	1	1	1
Pediatric immobilization device	0	0	0	1
X-Collars™	4	4	4	4
Soft cervical collars – small pediatric	2	2	2	2
Adult traction splint for femur	1	1	1	1
Pediatric traction splint for femur or adult traction splint that adjusts to pediatric size	1	1	1	1
Rigid splints for splinting each extremity	1	2	1	2
Sterile burn sheets	2	2	2	4
Occlusive dressings	2	2	2	4
2 x 2 gauze pads Sterile	0	0	4	8
4 x 4 gauze pads Sterile	10	10	10	10
Hemostatic dressings: Quick Clot Combat Gauze LE; or Quick Clot, EMS Rolled Gauze, 4x4 Dressing, Trauma Pad; or Celox Gauze, Z-Fold Hemostatic Gauze; or Celox Rapid, Hemostatic Z-Fold Gauze	2	2	2	2
Trauma dressings	2	2	2	4
Gauze roll type bandages, size 2 or 4 or 6	2	2	2	4
Triangular bandages	1	1	1	2
Instant ice packs	2	2	2	8
Trauma Tourniquets: SOF Tactical Tourniquet or the Combat Application Tourniquet (CAT)	4	4	4	4
<b>General Equipment</b>				
San Joaquin County Map Book (current within 2 years) or GPS Equivalent	1	1	1	1

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Table 1: ALS and BLS Common Equipment and Supplies	Par Level			
	BLS		ALS	
	NT	AMB	NT	AMB
Map book for assigned response zones or district (current within 1 year) or GPS Equivalent	1	1	1	1
Battery operated flashlight	1	1	1	1
Functional environmental controls for heat and air conditioning for the patient compartment.	NR	1	NR	1
Patient compartment door latches operable from inside and outside.	NR	1	NR	1
Patient sheets (disposable)	0	2	0	4
Patient blankets (disposable)	1	2	1	2
Patient pillows	0	2	0	2
Ambulance gurney with mattress, capable of elevating the head, feet, and adjustable to several levels.	0	1	0	1
VHF and UHF mobile radio with minimum of 45-watt power located in the driver's compartment programmed to communicate with dispatch, hospitals, and other responding units to include the following frequencies: SJC Med Net channels 1 through 8, SJC HEAR, and Cal Cord.	NR	1	1	1
UHF control head, microphone and speaker installed in each ambulance's patient compartment to communicate with the base and receiving hospitals.	NR	1	NR	1
San Joaquin County EMS Agency BLS Protocols	1	1	1	1
San Joaquin County EMS Agency ALS Protocols	NR	NR	1	1
Field Operations Guide ICS 420-1 ( <i>FOG Manual</i> ), current edition	1	1	1	1
START triage tags	50	20	50	50
MCI Vests - Medical Group Supervisor, Triage Unit Leader (minimum)	0	0	1	1
<b>Infection Control</b>				
Bottle of instant hand sanitizer (alcohol based) or box of disinfectant wipes for human use.	1	2	1	2
Biohazard bags (various sizes recommended)	2	3	3	5
Commercial Biohazard spill kit or equivalent	1	1	1	1
Covered waste container	0	1	0	1
Needle disposal system, which is OSHA compliant	1	1	1	1
Antibacterial disinfectant solution	1	1	1	1
Latex free gloves in sizes small, medium, large, extra-large.	1 box	1 box	1box	1 box
Isolation Kit including: (2) Gowns, (2) N95 or N100 respirators, (2) eye/face splash guards. Must have sizes sufficient for all staff	3	2	3	2

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Table 1: ALS and BLS Common Equipment and Supplies	Par Level			
	BLS		ALS	
	NT	AMB	NT	AMB
necessary to meet OSHA requirements.				

Table 2: BLS Specific Medications, Supplies, and Equipment	Par Level	
	BLS NT	BLS AMB
Epinephrine auto-injector (adult) 0.3mg	1	1
Epinephrine auto-injector (pediatric) 0.15mg	1	1
Naloxone preload syringe	2	1
Mucosal Atomizer Device	2	1
Glucose for oral administration (tube)	1	1
Saline/Sterile Water Irrigating	2000 ml	2000 ml
Glucometer with spare batteries	1	1
Glucometer test strips and lancets	25 each	25 each
Aspirin chewable 81 mg tablets	1 bottle	1 bottle
Dial-a-Flow or equivalent	NA	1

Table 3: ALS Specific Medications, Supplies, and Equipment	Par Level	
	ALS NT	ALS AMB
Acetaminophen – liquid for oral administration	2,600 mg	2,600 mg
Adenosine for injection	30 mg	30 mg
Albuterol Aerosolized Solution 2.5 mg each	4	8
Aspirin, chewable 81 mg tablets	1 bottle	1 bottle
Atropine for injection	3 mg	6 mg
Atrovent (Ipratropium bromide HFA) 0.5 mg packets	2	3
Diphenhydramine for injection	50 mg	100 mg
Diphenhydramine – liquid for oral administration	50 mg	100 mg
Calcium Chloride for injection	0	1 gm
Dextrose 50% for injection or; Dextrose 10% solution in 250 ml bags for injection	50 gm or (3) 250 ml bags of 10% solution or combination	75 gm or (2) 250 ml bags of 10% solution or combination
Dopamine for injection	0	400 mg
Epinephrine 1:1,000 for injection	2 mg	4 mg
Epinephrine 1:10,000 for injection	4 mg	8 mg
Fentanyl for injection	300 mcg	500 mcg

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Table 3: ALS Specific Medications, Supplies, and Equipment	Par Level	
	ALS NT	ALS AMB
Glucose for oral administration (tube)	2	2
Ibuprofen – liquid for oral administration	1,600 mg	1,600 mg
Lidocaine for injection	400 mg	400 mg
Magnesium Sulfate for injection	4 gm	8 gm
Midazolam for injection	10 mg	20 mg
Morphine Sulfate for injection	20 mg	40 mg
Naloxone for injection	2 mg	4 mg
Nitroglycerin spray (minimum of 60 metered doses) or Tablet 1/150 gr	1 bottle	2 bottles
IV Normal Saline 250ml (maintained at manufacturer's recommended temperature range)	4	4
IV Normal Saline 1000ml bags (maintained at a range of 2 degrees within normal body temperature)	2	2
IV warming system capable of maintaining two 1000ml bags at a range of 2 degrees within normal body temperature	1	1
IV Normal Saline 500ml or 1000ml bags (maintained at manufacturer's recommended temperature range)	4000 ml	8000 ml
Normal saline for injection 10ml or 20 ml vials or preloads	4	4
Saline/Sterile Water 1000ml Irrigating	2	5
Ondansetron – Packet of 2 x 4mg oral disintegrating tablets	8 mg	16 mg
Ondansetron for injection	0	16 mg
Sodium Bicarbonate for injection	50 mEq	100mEq
IV start kit, which contains: – (2) Alcohol or Chlorhexidine wipes, (1) Roll tape, 3/4", (2) – 2" x 2" gauze sponge, (1) ID label, (1) Providone iodine prep, (1) Adhesive bandage, (1) Latex Free Tourniquet, (1) OpSite Dressing (or equivalent)	3	8
Disposable razors	2	2
IV catheters each size: 16ga, 18ga, 20ga, 22ga	2	5
IV catheters each size: 14ga, 24ga	2	2
Hypodermic needles each size: 20ga, 21ga, 22ga, 23ga, 25ga	2	5
Disposable syringes each size: 1ml sub-q, 3ml, 5ml/6ml, 10ml/12ml	2	3
Disposable syringes each size: 20ml/30ml	1	2
EZ-IO drill	0	1
EZ-IO Needles each size: 15mm, 25mm	0	1
Betadine solution or swabs	2	4
Solution administration set, Macrodrip	2	4
Solution administration set, Microdrip	1	2
IV extension tubing	2	4

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Table 3: ALS Specific Medications, Supplies, and Equipment	Par Level	
	ALS NT	ALS AMB
Secondary IV infusion kit	2	4
Medication added labels	2	4
Saline locks	2	4
Dial-a-Flow or equivalent	1	1
1000ml Pressure infusion bag or equivalent	1	1
Mucosal Atomizer Device	2	2

Table 4 Optional Equipment	Par Level	
	ALS NT	ALS AMB
Non C Channel Video Laryngoscope with photo or video recording ability *Must be approved by medical director prior to being put into service.	1	1

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