





SAN MATEO COUNTY HEALTH
EMERGENCY
MEDICAL SERVICES

EMS POLICY	205
Effective:	April 2022
Approval: EMS Director Travis Kusman, MPH	Signed: 
Approval: EMS Medical Director Greg Gilbert, MD	Signed: 

EMERGENCY AMBULANCE AND FIRST RESPONSE UNIT STANDARDS

I. PURPOSE

This policy establishes requirements for emergency ambulance and first responder staffing, medications, equipment, and supplies for emergency ambulances, first responder apparatus, and EMS supervisor vehicles. This policy further defines restocking requirements of medications, medical supplies, and equipment.

II. AUTHORITY

California Health and Safety Code, Division 2.5, §1798

III. DEFINITIONS

Advanced Life Support (“ALS”) Ambulance [or “Paramedic Ambulance”]: An ambulance authorized by LEMSA to provide ALS emergency services within San Mateo County.

Advanced Life Support (“ALS”) First Responder Unit (“FRU”): A first responder unit authorized by LEMSA to provide ALS emergency services within San Mateo County.

Basic Life Support (“BLS”) Ambulance: An ambulance authorized by LEMSA to provide BLS emergency services within San Mateo County.

Basic Life Support (“BLS”) First Responder Unit (“FRU”): A first responder authorized by LEMSA to provide BLS emergency services within San Mateo County.

Emergency Medical Services Agency (“LEMSA”) [or “Agency”]: The San Mateo County EMS Agency is designated as the Local Emergency Medical Services Agency (LEMSA) and is statutorily charged with primary responsibility for administration and medical control of emergency medical services in San Mateo County.

IV. STAFFING REQUIREMENTS

- A. Each ALS ambulance shall be staffed with a minimum of one currently licensed and LEMSA accredited paramedic and one currently California certified EMT.
- B. Each ALS first responder apparatus shall be staffed with a minimum of two personnel, at least one of whom is a currently licensed and LEMSA accredited paramedic.



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- C. Each BLS first responder apparatus shall be staffed with a minimum of two personnel, at least one of whom is a currently California certified EMT.
- D. Each EMS Supervisor vehicle shall be staffed with a minimum of one currently licensed and accredited paramedic approved by the LEMSA to function in a supervisory capacity.



V. MEDICATION REQUIREMENTS

The following medications are authorized at minimum levels to be carried on all San Mateo County emergency ambulances, first response units, and EMS Supervisor units.

Medication	BLS Ambulance	ALS Ambulance	BLS FRU	ALS FRU	EMS Supervisor
Adenosine	n/a	36 mg	n/a	18 mg	18 mg
Albuterol 0.83% solution	n/a	8 vials	n/a	4 vials	4 vials
Aspirin (81 mg tablets)	1 bottle	2 bottles	1 bottle	1 bottle	1 bottle
Atropine 1mg preload	n/a	2 mg	n/a	1 mg	1 mg
Atropine multi-dose vial (single patient use only)	n/a	1 bottle	n/a	1 bottle	1 bottle
Calcium Chloride 1 g preload	n/a	2 g	n/a	1 g	1 g
Dextrose 10% (25 g/250 ml) 250 ml premixed bag	n/a	50 g	n/a	25 g	25 g
Diphenhydramine 50 mg/1 ml	n/a	100 mg	n/a	100 mg	100 mg
Dopamine 400 mg/250 ml premixed bag	n/a	800 ml	n/a	400 ml	400 ml
Epinephrine 1:1,000 (1 mg/1 ml) vial	n/a	12 mg	n/a	6 mg	6 mg
Epinephrine 1: 10,000 (1 mg/10 ml) preload	n/a	8 mg	n/a	4 mg	4 mg
Fentanyl (50 mcg/1 ml) vial	n/a	200 mcg	n/a	100 mcg	100 mcg
Glucagon 1 mg vial	n/a	2 mg	n/a	1 mg	1 mg
Glucose - oral	2 doses	2 doses	1 dose	1 dose	1 dose
Lidocaine (100 mg/5 ml) preload	n/a	400 mg	n/a	200 mg	200 mg
Midazolam (5 mg/1 ml) vial	n/a	20 mg	n/a	10 mg	10 mg
Ondansetron (4 mg/ 2 ml) vial	n/a	16 mg	n/a	8 mg	8 mg
Ondansetron 4 mg tablet	n/a	16 mg	n/a	8 mg	8 mg
Naloxone (2 mg/2 ml) preload	8 mg	8 mg	4 mg	4 mg	4 mg
Nitroglycerine tablets	n/a	2 bottles	n/a	1 bottle	1 bottle
Sodium Bicarbonate (1 mEq/1 ml) preload	n/a	100 mEq	n/a	100 mEq	100 mEq
IV Fluids	BLS Ambulance	ALS Ambulance	BLS FRU	ALS FRU	EMS Supervisor
Normal Saline 1,000 ml bag	n/a	6,000 ml	n/a	1,000 ml	1,000 ml
Normal Saline 10 ml vial or syringe	n/a	40 ml	n/a	20 ml	20 ml



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VI. MEDICAL SUPPLIES AND EQUIPMENT

The following equipment is authorized at minimum levels to be carried on all San Mateo County emergency ambulances, first response units, and EMS Supervisor vehicles.





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Personal Protective Equipment	BLS Ambulance	ALS Ambulance	BLS FRU	ALS FRU	EMS Supervisor
Latex-free exam gloves	2 boxes	2 boxes	1 box	1 box	1 box
Sterile gloves (sizes 5, 6, 7, 8)	2 each	2 each	n/a	n/a	n/a
Isolation gown	1 per person	1 per person	1 per person	1 per person	1 per person
Isolation mask (surgical)	1 per person	1 per person	1 per person	1 per person	1 per person
Medical waste bag (red)	2	2	1	1	1
N95 or P100 mask	1 per person	1 per person	1 per person	1 per person	1 per person
Eye protection	1 per person	1 per person	1 per person	1 per person	1 per person
Airway Management Equipment	BLS Ambulance	ALS Ambulance	BLS FRU	ALS FRU	EMS Supervisor
Laryngoscope handle (adult, pediatric)	n/a	1 each	n/a	1 each	1 each
Adult blade (straight 3, 4)	n/a	1 each	n/a	1 each	1 each
Adult blade (curved 3, 4)	n/a	1 each	n/a	1 each	1 each
Pediatric blade (straight 0,1,2)	n/a	1 each	n/a	1 each	1 each
Pediatric blade (curved 1, 2)	n/a	1 each	n/a	1 each	1 each
ET tubes (sizes 6.0 – 8.0)	n/a	2 each	n/a	1 each	1 each
ETTI (Bougie)	n/a	2 each	n/a	1 each	1 each
Bacterial/ viral BVM filter	1 each	2 each	1 each	1 each	1 each
ETT holder (tube tamer)	n/a	2 each	n/a	1 each	1 each
King airway (size 3, 4, 5)	1 each	2 each	1 each	1 each	1 each
CPAP devices (S, M, L)	1 each	2 each	1 each	1 each	1 each
EtCO ₂ device (ETT)	n/a	2 each	n/a	1 each	1 each
EtCO ₂ device (nasal)	n/a	2 each	n/a	1 each	1 each
CO monitoring device	n/a	n/a	n/a	n/a	1 each
Powered portable suction	1 each	1 each	1 each	1 each	1 each
Patient Assessment and Exam Equipment	BLS Ambulance	ALS Ambulance	BLS FRU	ALS FRU	EMS Supervisor
Glucometer and test strips	1 each	1 each	1 each	1 each	1 each
Stethoscope	1 each	1 each	1 each	1 each	1 each
Pediatric Broselow tape	n/a	1 each	n/a	1 each	1 each
Portable blood pressure cuff (adult, thigh, pediatric)	1 each	1 each	1 each	1 each	1 each
Pulse oximeter (adult, pediatric)	1 each	1 each	1 each	1 each	1 each
Thermometer	1 each	1 each	1 each	1 each	1 each
Magill forceps (adult, pediatric)	n/a	1 each	n/a	1 each	1 each
Pleural decompression kit	n/a	1 each	n/a	1 each	1 each
Water-based lubricant	n/a	4 each	n/a	2 each	2 each
Suction catheters (sizes 6, 8, 10, 14, 16)	2 each	2 each	1 each	1 each	1 each



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Patient Assessment and Exam Equipment	BLS Ambulance	ALS Ambulance	BLS FRU	ALS FRU	EMS Supervisor
Suction catheter (rigid tip)	2 each	2 each	1 each	1 each	1 each
Suction tubing	2 each	2 each	1 each	1 each	1 each
Portable suction (battery powered)	1 each	1 each	1 each	1 each	1 each
Nasal airways (sizes 28, 30, 32, 34)	2 each	2 each	1 each	1 each	1 each
Oral airways (sizes 0, 1, 2, 3, 4, 5, 6 (or metric equivalent))	2 each	2 each	1 each	1 each	1 each
Nasal cannula (adult)	4 each	4 each	1 each	1 each	1 each
Nasal cannula (pediatric)	2 each	2 each	1 each	1 each	1 each
Non-rebreather mask (adult)	4 each	4 each	2 each	2 each	2 each
Oxygen mask (pediatric)	2 each	2 each	1 each	1 each	1 each
Patient Assessment and Exam Equipment	BLS Ambulance	ALS Ambulance	BLS FRU	ALS FRU	EMS Supervisor
Oxygen mask (infant)	2 each	2 each	1 each	1 each	1 each
Pen light	2 each	2 each	1 each	1 each	1 each
Bag-valve-mask (adult, pediatric)	2 each	2 each	1 each	1 each	1 each
Bag-valve-mask (infant)	1 each	1 each	1 each	1 each	1 each
Portable oxygen with regulator (must be sufficient to provide patient with not less than 10 L/min for 20 minutes)	1 each	1 each	1 each	1 each	1 each
Oxygen gaskets for regulator	1 each	1 each	1 each	1 each	1 each
Oxygen regulator wrench	1 each	1 each	1 each	1 each	1 each
Cardiac Monitoring Equipment	BLS Ambulance	ALS Ambulance	BLS FRU	ALS FRU	EMS Supervisor
AED/defibrillator	1 each	n/a	1 each	n/a	n/a
Metronome	1 each	1 each	1 each	1 each	1 each
Portable biphasic cardiac monitor/defibrillator with 12-Lead and transmission capabilities and EtCO2 waveform capnography (County approved)	n/a	1 each	n/a	1 each	1 each
ECG paper (roll)	n/a	2 each	n/a	2 each	2 each
Adult electrodes (sets)	n/a	2 each	n/a	1 each	1 each
Pediatric electrodes (sets)	n/a	2 each	n/a	1 each	1 each
Adult defib pads	2 each	2 each	1 each	1 each	1 each
Pediatric defib pads	2 each	2 each	1 each	1 each	1 each
Cardiac monitor trunk cable	n/a	1 each	n/a	1 each	1 each



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Cardiac Monitoring Equipment	BLS Ambulance	ALS Ambulance	BLS FRU	ALS FRU	EMS Supervisor
Cardiac monitor 12-Lead ECG cable	n/a	1 each	n/a	1 each	1 each
Cardiac monitor 4-Lead precordial lead cable	n/a	1 each	n/a	1 each	1 each
Bandaging and Splinting Equipment	BLS Ambulance	ALS Ambulance	BLS FRU	ALS FRU	EMS Supervisor
Sterile bandage compress	12 each	12 each	4 each	4 each	4 each
Petroleum gauze pads	2 each	2 each	1 each	1 each	1 each
Gauze pads (4"x4")	12 each	12 each	4 each	4 each	4 each
Universal dressing (10"x30")	2 each	2 each	1 each	1 each	1 each
Triangular bandage (40")	2 each	2 each	2 each	2 each	2 each
Rolled bandage (Kerlix)	6 each	6 each	2 each	2 each	2 each
Trauma shears	1 each	1 each	1 each	1 each	1 each
Extremity traction splint	1 each	1 each	1 each	1 each	n/a
Cervical collar (rigid) to fit all patients > 1 year	2 each	2 each	1 each	1 each	1 each
Gauze pads (4"x4")	12 each	12 each	4 each	4 each	4 each
Medium vacuum splint (disposable)	2 each	2 each	1 each	1 each	n/a
Cardboard splint (arm, leg)	1 each	1 each	1 each	1 each	n/a
Rigid SAM-type splint	2 each	2 each	2 each	2 each	2 each
Spinal immobilization device (backboard)	1 each	1 each	1 each	1 each	n/a
Spinal immobilization straps	2 each	2 each	1 each	1 each	n/a
Pediatric immobilization device	1 each	1 each	1 each	1 each	n/a
Bandaging and Splinting Equipment	BLS Ambulance	ALS Ambulance	BLS FRU	ALS FRU	EMS Supervisor
KED-type device	1 each	1 each	n/a	n/a	n/a
Triangular bandage (40")	2 each	2 each	2 each	2 each	2 each
Sterile burn sheet	2 each	2 each	1 each	1 each	1 each
Head immobilizer	2 each	2 each	2 each	2 each	2 each
Tape (1", 2" rolls)	1 each	1 each	1 each	1 each	1 each
Arm board (short, long)	1 each	1 each	n/a	n/a	n/a
Cold packs	2 each	2 each	2 each	2 each	2 each
Hot packs	1 each	1 each	1 each	1 each	1 each
Restraints (set)	1 each	1 each	n/a	n/a	n/a
Hemostatic gauze	2 each	2 each	2 each	2 each	2 each
Russell chest seal	2 each	2 each	2 each	2 each	2 each



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Bandaging and Splinting Equipment	BLS Ambulance	ALS Ambulance	BLS FRU	ALS FRU	EMS Supervisor
Irrigation solution 500 ml sterile water	2 each	2 each	n/a	n/a	n/a
OB kit that includes gloves, umbilical cord clamp/tape, dressings, towel, bulb syringe, medical waste bags	1 each	1 each	1 each	1 each	1 each
IV, Saline Lock, and Blood Drawing Equipment	BLS Ambulance	ALS Ambulance	BLS FRU	ALS FRU	EMS Supervisor
Infusion set (macro drip)	n/a	6 each	n/a	1 each	1 each
Infusion set (micro drip)	n/a	1 each	n/a	1 each	1 each
3-way stop-cock	n/a	2 each	n/a	1 each	1 each
Saline lock	n/a	6 each	n/a	2 each	2 each
Syringes (1, 3, 10 ml)	n/a	4 each	n/a	2 each	2 each
IV catheters (14, 16, 18, 20, 22, 24 g)	n/a	4 each	n/a	2 each	2 each
Needles for injection (23 g 1")	n/a	2 each	n/a	2 each	2 each
Intraosseous driver	n/a	1 each	n/a	1 each	1 each
IO needles (yellow, pink, blue) with tubing	n/a	2 each	n/a	1 each	1 each
Prep razor	n/a	1 each	n/a	1 each	1 each
Alcohol wipes	n/a	10 each	n/a	10 each	10 each
Betadine wipes	n/a	6 each	n/a	6 each	6 each
IV tourniquets	n/a	2 each	n/a	2 each	2 each
Pressure infuser for 1,000 ml IV bags	n/a	1 each	n/a	1 each	1 each
Portable sharps container	n/a	1 each	n/a	1 each	1 each
Communication Equipment	BLS Ambulance	ALS Ambulance	BLS FRU	ALS FRU	EMS Supervisor
Cellular telephone	1 each	1 each	1 each	1 each	1 each
Mobile two-way EMS radio installed in vehicle	1 each	1 each	n/a	n/a	1 each
Portable two-way EMS/ fire radio for each crew member	1 per person	1 per person	1 per person	1 per person	1 per person
Mobile or portable two-way fire radio	1 each	1 each	1 each	1 each	1 each



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Irrigation solution 500 ml sterile water	2 each	2 each	n/a	n/a	n/a
OB kit that includes gloves, umbilical cord clamp/tape, dressings, towel, bulb syringe, medical waste bags	1 each	1 each	1 each	1 each	1 each
IV, Saline Lock, and Blood Drawing Equipment	BLS Ambulance	ALS Ambulance	BLS FRU	ALS FRU	EMS Supervisor
Infusion set (macro drip)	n/a	6 each	n/a	1 each	1 each
Infusion set (micro drip)	n/a	1 each	n/a	1 each	1 each
3-way stop-cock	n/a	2 each	n/a	1 each	1 each
Saline lock	n/a	6 each	n/a	2 each	2 each
Syringes (1, 3, 10 ml)	n/a	4 each	n/a	2 each	2 each
IV catheters (14, 16, 18, 20, 22, 24 g)	n/a	4 each	n/a	2 each	2 each
Needles for injection (23 g 1")	n/a	2 each	n/a	2 each	2 each
Intraosseous driver	n/a	1 each	n/a	1 each	1 each
IO needles (yellow, pink, blue) with tubing	n/a	2 each	n/a	1 each	1 each
Prep razor	n/a	1 each	n/a	1 each	1 each
Alcohol wipes	n/a	10 each	n/a	10 each	10 each
Betadine wipes	n/a	6 each	n/a	6 each	6 each
IV tourniquets	n/a	2 each	n/a	2 each	2 each
Pressure infuser for 1,000 ml IV bags	n/a	1 each	n/a	1 each	1 each
Portable sharps container	n/a	1 each	n/a	1 each	1 each
Communication Equipment	BLS Ambulance	ALS Ambulance	BLS FRU	ALS FRU	EMS Supervisor
Cellular telephone	1 each	1 each	1 each	1 each	1 each
Mobile two-way EMS radio installed in vehicle	1 each	1 each	n/a	n/a	1 each
Portable two-way EMS/ fire radio for each crew member	1 per person	1 per person	1 per person	1 per person	1 per person
Mobile or portable two-way fire radio	1 each	1 each	1 each	1 each	1 each

VIII. RESTOCKING OF MEDICATIONS, MEDICAL SUPPLIES, AND EQUIPMENT

On-duty paramedics and EMS Supervisors are responsible for ensuring in-service ambulances and FRUs within their respective control comply with the requirements of this Policy and are stocked with adequate levels of medications, medical supplies, and equipment at all times. All prehospital providers share responsibility for restocking their assigned ambulance or first response apparatus.. When needed, the on-duty EMS Supervisor will be



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requested to restock. The on-duty EMS Supervisor will ensure the timely resupply of ambulances or first response apparatus to maintain the minimum levels required by this Policy.

IX. FIRST RESPONSE UNIT AND AMBULANCE INSPECTION AND RIDE ALONGS

The LEMSA reserves the right to inspect or ride along on any first response unit or ambulance utilized to respond to requests for service within the 9-1-1 system without prior notice. Any first response unit or ambulance that does not meet the standards outlined in this Policy shall not be permitted to respond to 9-1-1 requests for service. LEMSA reserves the right to reinspect any first response unit or ambulance identified to be non-compliant with this Policy prior to its return to operations in the provision of emergency medical services.