



County of San Diego

JEFF COLLINS
DIRECTOR
(858) 974-5924
Fax (858) 467-9662

PUBLIC SAFETY GROUP
SAN DIEGO COUNTY FIRE
SAN DIEGO COUNTY EMERGENCY MEDICAL SERVICES OFFICE
5510 Overland Avenue, Suite 250, San Diego, CA 92123-1239
www.SanDiegoCountyEMS.com

ANDREW (ANDY) PARR
EMS ADMINISTRATOR
Deputy Director, Departmental Operations
(619) 285-6429

April 20, 2022

NORMAL SALINE SHORTAGES – GUIDANCE FOR EMS PROVIDERS

The San Diego County EMS Office is aware that intravenous normal saline fluid is in shortage. Normal saline is used for both resuscitation and medication delivery in the prehospital system.

Following consultation with community medical experts, including the Base Station Physician's Committee (BSPC) member and Medical Audit Committee (MAC) trauma medical directors, I grant an immediate addition of Lactated Ringers (LR) intravenous (IV) fluid to the San Diego County EMS Paramedic Scope of Practice ([P-401](#)) and AEMT Scope of Practice ([B-451](#)). This temporary authority extends until the normal saline shortage resolves or March 31, 2023, whichever is sooner.

With the exception of amiodarone and ketamine, County of San Diego EMS medications listed in [P-401](#) may be infused with LR. This substitution shall be on a one-for-one basis, i.e., a protocol treatment of 250 mL normal saline fluid bolus may be replaced with a 250 mL LR fluid bolus. LR may be substituted for all inventory par levels listed in [S-103](#), [P-806](#), [P-807](#), and [S-836](#).

Whenever possible, normal saline stock should be preserved for amiodarone and ketamine administration. When normal saline IV bags are unavailable:

- amiodarone may be administered via IV push ([S-127](#))
- lidocaine bolus may be substituted for amiodarone infusion ([S-127](#))
- acetaminophen or an opioid (e.g., fentanyl, morphine) may be substituted for ketamine ([S-141/S-173](#))

We expect ongoing national shortages of pharmaceuticals and medical supplies. IVs should only be placed when the paramedic determines an immediate or probable need to deliver intravenous fluids; medications may be infused through saline locks or any crystalloid-filled IV extension sets. This judicious use of normal saline is intended to conserve supplies and medications for use when most critically needed.

Thank you for your assistance in continuing to provide outstanding care to our patients.

Sincerely,

Kristi L. Koenig, MD, FACEP, FIFEM, FAEMS, Medical Director
San Diego County Emergency Medical Services Office
San Diego County Fire

cc: Todd Costantini, MD, FACS, Chair, Medical Audit Committee
Gary Vilke, MD, FACEP, FAAEM, Chair, Base Station Physician Committee
Andrew Parr, EMS Administrator