



January 28, 2022

Supply shortages, including fluids and medications, are not new to the practice of emergency and pre-hospital medicine. It affects all levels of clinical care and calls for a malleable approach to protocol generation and interpretation. Shortages and life-threatening conditions do not always follow the same timeline and seemingly arbitrary schedules for expiration may require extension. Under the umbrella of safety and the patient's best interests, short-term shortages in supply may demand short-term adjustments in protocol.

Along this line, there is an anticipated decrease in the national supply and access to 0.9% normal saline (NS), some medications, and other supplies. For these reasons, the following recommendations may be considered:

1. For shortages of 0.9% NS, consider if the patient requires the administration of fluids. If not, establish an IV lock per agency guidelines and reserve fluids for only those patients who need them. If NS becomes unavailable, individual medical directors may allow the substitution of lactated Ringer's (LR) for NS in all indications for fluid resuscitation until this shortage can be mitigated.
2. For critical medication shortages, refer to DMEMSMD protocol 9000 General Guidelines: Medication Administration for guidance on use of medications past expiration date.
3. Various other supply shortages may arise. Agencies should remain cognizant of these supply issues and make attempts to minimize waste.

The Denver Metro EMS Medical Directors and our partners have been faced with similar supply and demand circumstances in the past. Every effort to maximize patient care remains the focus in the face of these shortages.

Signed,

*The physician members of the Denver Metro EMS Medical Directors Group.*