



## HEALTH ADVISORY

October 9, 2024

### EMS SUPPLY CHAIN DISRUPTION AND CONSERVATION STRATEGIES FOLLOWING CLOSURE OF BAXTER PLANT

Guidance for all emergency medical services agencies.

The EMS sector relies on intravenous (IV) fluids to provide critical care during emergencies. Recent supply chain disruptions, including the closure of a major IV solution and related supplies manufacturing plant, have led to challenges in maintaining steady access to these essential supplies. While there may not be an official shortage at this time, it is crucial for EMS agencies to adopt proactive strategies to conserve IV fluids, ensuring that available stock is used effectively and efficiently.

This advisory outlines conservation strategies tailored specifically for the EMS environment. These strategies aim to optimize the use of IV fluids during transport and pre-hospital care, prioritize critical situations, and encourage the use of alternative treatment methods when appropriate. By implementing these measures, EMS providers can maintain high standards of patient care while managing supply chain uncertainties.

Through thoughtful conservation efforts, EMS agencies can help limit the impact of supply disruptions and ensure that critical resources are available when they are most needed.

#### Conservation Strategies

Immediately Begin to Inventory, Monitor, and Track Usage: Implement systems to track the inventory of IV fluids at the agency level, as well as the volume of IV fluids used per provider and per patient, ensuring appropriate utilization. Data on cases where fluids are withheld should also be collected to refine future protocols.

Limit Routine Use in Pre-Hospital Settings: EMS personnel should avoid starting IVs unless it is anticipated that IV medication or fluid resuscitation will be required during transport. Encourage EMS providers to use clinical judgment when deciding whether to initiate IV access in pre-hospital care.

Prioritize Critical Uses: IV fluids should be reserved for patients in critical situations, such as severe dehydration or trauma, where alternative routes (oral or enteral) are not viable. Regularly review EMS protocols to ensure that IV fluids are administered only when absolutely necessary. For conscious and stable patients, promote oral hydration as a viable alternative to IV fluids.

Optimize IV Fluid Usage: In cases where smaller volumes are sufficient, use smaller IV bags (e.g., 250 mL or 500 mL) to reduce waste and conserve stock. Administer the minimal necessary volume of IV fluids to stabilize patients before hospital transport and consider limiting fluid volumes in non-critical cases. When diluting medications, use only the amount of fluid necessary to ensure the medication's stability and effectiveness.

Alternative Routes for Medication Administration: Where clinically appropriate, consider administering medications intramuscularly (IM), subcutaneously (SQ), or by mouth (PO) instead of through an IV route.

Enhance EMS Training and Communication: Conduct regular training for EMS personnel on effective fluid conservation techniques and alternative care methods. Provide repeat messaging to personnel at the beginning of each shift on the importance of preserving supplies. Maintain continuous contact with suppliers to stay informed about product allocations and potential alternatives. Provide clear communication to ensure that EMS teams are prepared for changes in supply availability.

Collaborate Across Health Care Systems: Effective management of IV fluid resources during supply chain disruptions requires collaboration across the entire health care system. EMS providers, hospitals, medical control, and medical directors must work together to develop coordinated approaches to resource management and patient care. All stakeholders should actively participate in conservation efforts, ensuring that IV fluids are distributed and used appropriately across all settings, and that protocols are aligned for optimal patient outcomes.

### **Additional Resources and Information**

To further assist EMS agencies in managing IV solution conservation during supply chain disruptions, the following resources and tools are recommended. These resources provide up-to-date information, best practices, and guidance from relevant authorities and organizations.

American Society of Health-System Pharmacists (ASHP): ASHP provides comprehensive guidance on managing fluid shortages, including strategies for conservation in various healthcare settings.

<https://www.ashp.org/drug-shortages/shortage-resources/publications/fluid-shortages-suggestions-for-management-and-conservation>

Baxter Manufacturing Updates: Baxter provides updates on the status of their IV solution production, including product availability and allocation details.

<https://www.baxter.com/baxter-newsroom/hurricane-helene-updates>

Food and Drug Administration (FDA): The FDA offers updates on medical product shortages, including information on regulatory actions being taken to address supply chain disruptions and ensure continued access to IV solutions.

<https://dps.fda.gov/drugshortages>