

The Effects of Drug and Supply Shortages on Children's Hospitals and Their Patients



Drug and supply shortages an ongoing concern

Drugs and supplies intended for children are unique. Many pediatric drugs come in formulations to support safer dosing, such as an altered concentration or format. To best serve our most vulnerable populations, pediatric-specific supplies are created with sensitive skin, growing bodies and smaller sizes in mind. These pediatric products are not used as often as standard-sized products and are frequently the first affected by shortages.

When drugs or supplies are in, or nearing, shortage, important patient procedures may be delayed or even canceled. Sometimes the location of care must abruptly change—care intended to be administered in a setting close to a child's home may have to be moved to a main hospital. Shortages can also affect care protocols when drugs or supplies must be changed to alternatives. Any of these situations can put unnecessary burden on patients and families by causing the patient to miss school and activities. The caregiver might also miss work or be unable to care for other children in the family.

Children's hospitals have long dealt with shortages of drugs and supplies that patients rely on for care, treatment and recovery. More recently, a surge of critical drugs and supply shortages have drastically affected fundamental care such as infant feeding.

Addressing critical shortages

Communication is vital when faced with a critical shortage. To assess a shortage, CHA begins by convening a small group of hospitals and suppliers to learn more about the shortage and its cause. We then rely on data to determine the effect and if it's a pediatric-specific need, such as infant feeding shortages. After that, we determine how pediatrics are disproportionately affected, as compared to adults, and how the shortage has occurred. Finally, we collaborate across teams, hospitals, industry partners and government agencies to understand and inform next steps and work to ensure hospitals receive the necessary drugs and supplies, allowing patients to receive the most optimal care available. These steps often happen in tandem or repeatedly, with real-time communication between stakeholders.



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Drug shortage

- Shortages affect pediatric essential drugs—including lifesaving electrolytes, total parenteral nutrition (TPN), antineoplastics, and plasma products used to treat critical conditions such as sepsis, cancer and immune deficiencies.
- Children’s hospitals spend an average of 51 hours managing shortages, compared to other hospitals that spend 36 hours on average. As a result, they’re more than twice as likely to report hiring additional staff. This additional time is often dedicated to compounding replacement products into safe pediatric dosage forms.¹
- Children’s hospitals report that, on average, the cost to manage one drug shortage from onset to correction is estimated at \$50,000 in addition to the actual cost of the drug itself.¹

Supply shortage

- Shortages impact pediatric essential supplies including infant feeding, dialysis kits, pediatric sized syringes, TPN compounding supplies and small volume solutions.
- Children’s hospitals supply chain teams are forced to spend additional resources on supply shortages, often devoting more time and money locating multiple substitute products that are safe, effective and reliable for pediatrics.
- Additional data is expected from the CHA and Vizient Pediatric Essential Supplies Project.

Shortage policy priorities

Children’s hospitals face many barriers as they attempt to prevent or mitigate shortages that can harm children. We urge policymakers to take the following actions to address pediatric drug and supply chain issues:

- Ensure additional transparency within the supply chain, including the location of production. The absence of this information hinders proactive steps to prevent and mitigate shortages—especially during natural disasters and other emergencies.
- Adjust the FDA drug shortages list to account for pediatric populations and pediatric drug formulations in a timely and accurate manner, including the potential for regional shortages.
- Implement policies that reduce the risk of pediatric drug and supply shortages by encouraging readiness to supply and/or competition in production of pediatric products that are often sole-sourced or under-resourced.
- Strengthen mechanisms for research and development on pediatric drugs, supplies procurement, strategy and guidance that can ensure timely access to sufficient pediatric-appropriate equipment, medications and supplies.

IMPACT TO CHILDREN’S HOSPITALS

Children’s hospitals have long dealt with shortages of critical drugs and supplies that patients rely on for treatment and recovery. Research by CHA and Vizient found that children’s hospitals are disproportionately affected by drug shortages, compared to non-pediatric hospitals.¹ A similar research project is currently underway to determine the impact of supply shortages on children’s hospitals.



¹ Pediatric Drug Shortage Trends and Best Practices for Mitigation Strategies. Children’s Hospital Association and Vizient. 2020.