

American Academy  
of Pediatrics



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Remarks of  
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On behalf of the  
**American Academy of Pediatrics**

Before the  
**Food and Drug Administration**  
**Center for Drug Evaluation and Research**  
**Drug Shortage Workshop**

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My name is Dr. DeWayne M. Pursley and I am Chief of Neonatology and Director of the Klarman Family Neonatal Intensive Care Unit at Beth Israel Deaconess Medical Center. I chair the American Academy of Pediatrics' (AAP) Section on Perinatal Pediatrics and am here today in an official capacity representing the AAP, a non-profit professional organization of 60,000 primary care pediatricians, pediatric medical subspecialists, and pediatric surgical specialists. Thank you for the opportunity to provide comments on drug shortages.

As a practicing pediatrician, I have seen firsthand the impact of drug shortages on the practice of pediatrics. Shortages, discontinuances, or interruptions in the pediatric drug supply have and will continue to put our patients at risk. Past and current shortages have forced pediatricians to rely on alternative therapies, if they exist. In many cases, these alternatives may be less than ideal for our patient populations and their safety and efficacy in pediatrics may not be known.

The AAP has worked for decades to ensure that medicines used in children are studied in children. The physiology of children is different than that of adults and this changes how they absorb, metabolize, eliminate, and respond to medications. It is because of these significant differences that it is important to remember that children are not just little adults, and that they must, wherever possible, have the benefit of age-specific therapeutic safety and efficacy data.

Two laws, the Best Pharmaceuticals for Children Act (BPCA) and the Pediatric Research Equity Act (PREA), have taken giant strides towards achieving this goal. The Academy has greatly appreciated its partnership with the Food and Drug Administration (FDA) on the implementation of these two laws and is proud that to date nearly 400 drugs have been relabeled with pediatric information as a result. The AAP looks forward to working with FDA to renew and strengthen these laws when they are up for reauthorization in 2012.

### **Impact on Pediatrics**

In recent years, many of the drug shortages have directly impacted children. Exactly two years ago, there was a widespread national shortage of 0.5% erythromycin ophthalmic ointment due to manufacturing changes. Four million children each year need erythromycin ophthalmic ointment for prophylaxis of ophthalmia neonatorum due to *Neisseria gonorrhoeae* and *Chlamydia trachomatis*. If left untreated, it can cause blindness. Some states mandate this treatment.

At the time of the shortage, the two other products with efficacy against *N. gonorrhoeae* were no longer available in the U.S. The government did not appear to have anticipated the

shortage and it took pressure from the AAP and others for federal agencies to develop and release recommendations for an alternative prophylaxis regimen. However, at that time, there were no safety and efficacy data for the alternative products.

More recently, my colleagues and I in neonatology have experienced shortages of component ingredients for a life-saving treatment for neonates, total parenteral nutrition (TPN), which is used in babies who cannot yet eat and have no alternative nutrition source. During the spring of this year, the manufacturer of component ingredients of TPN announced a nationwide voluntary recall. In some cases, they were the only manufacturer in the U.S. marketplace resulting in prolonged periods of no new supply. Among the ingredients in short supply are sodium chloride, calcium gluconate, phosphate (sodium and potassium), selenium, magnesium sulfate injections, and others. To date, supply is still not what it was prior to the voluntary recall. For newborns that rely on TPN intravenously as their source of nutrition, availability of these component ingredients is truly a matter of life or death.

Drug shortages impact general pediatricians and subspecialists alike. At present, pediatric rheumatologists are reporting shortages nationally of injectable methotrexate. Pediatric oncologists have been facing shortages of cytarabine, daunorubicin and other critical products where there are limited or no alternatives. But whether it's the propofol shortages that have had a profound impact on pediatric anesthesiology or persistent shortages of antibiotics such as intravenous preparations of trimethoprim/sulfamethoxazole or amikacin, drug shortages are increasingly more common. Among pediatric products that are in short supply, the intravenous preparations appear to be disproportionately over-represented.

The AAP welcomes the opportunity to explore with the FDA and others the causes behind these shortages as well as solutions for preventing and addressing them.

## **Prevention**

The AAP believes that a comprehensive solution to drug shortages must include provisions that prevent the shortage from occurring in the first place. Notification of physicians and pharmacists of drug shortages after the fact, as is all too often the case, frequently compromises care and puts patients at risk. We urge FDA to develop and maintain a list of critical medications that should specifically include medications used in pediatric populations. For pediatrics, such a list should not be limited to the labeled indication of the product since so many products used in children, especially neonates, are not labeled for their use. Among the products that should be included in the critical drugs list are those which come from a sole manufacturer.

Once this critical medications list is developed, FDA, working with other federal partners, should determine how much of the product is necessary to have on hand to meet demand in advance of a potential shortage, discontinuance or interruption. This list should be informed by the current rate of use of these drugs and by the time required to replenish the supply, allowing extra time for both. Then FDA and its partners should establish a mechanism for the purchase and storage of advance supplies of the critical medications on this list. AAP recommends FDA and its federal partners consider the creation of a National Critical Medication Stockpile, using the Strategic National Stockpile as a model.

FDA should develop and maintain a database containing information about the domestic and foreign manufacturers for all of the items on the critical medications list, regardless of whether their products are approved in the U.S. Over time, FDA should take steps to work with manufacturers so they can meet U.S. standards for safety and efficacy. Other efforts to increase supply should be explored.

### **Distribution**

The AAP is concerned about inconsistent distribution or maldistribution of products that are in short supply. We urge the FDA and its federal partners to establish a process to ensure fair and equitable distribution of products that are experiencing a shortage, discontinuance, or interruption. We also hope there will be strong national safeguards in place to protect against hoarding or price gouging. For products on FDA's critical medications list, it may be helpful for FDA or one of its federal partners to maintain a real-time map allowing purchasers to know where products can be found and in what quantity.

### **Communication**

The AAP is deeply concerned about FDA's current system for alerting pediatricians to potential or actual shortages, discontinuances, or interruptions in supply of pediatric products. The current system is simply too passive. We urge the FDA to develop a system for real-time, bi-directional exchange of information because in some cases health care providers are the first to learn about a change in supply. FDA should use the critical medications list to then develop a network of health care providers for each class of products that would be contacted immediately about a potential supply shortage, discontinuance, or interruption. The AAP has mechanisms to disseminate quickly such information to our 60,000 members. Increased staffing and resources at FDA's Office of Drug Shortages is also critical.

## **Addressing the Shortage**

Once the shortage, discontinuance, or interruption in supply has occurred, we urge the FDA to work more quickly with companies to restore their ability to manufacture safe and effective products. Special attention and urgency should be paid to the products on FDA's critical medications list. Because the lack of supply for certain critical products can represent a threat to the public health, we recommend FDA explore the use of authorities such as Emergency Use Authorization or personal importation provisions to allow for additional supply to enter the U.S. market from other manufacturers under time- and quantity-limited circumstances.

There have been instances where no new supply is available and no alternative manufacturer exists in the U.S. Therefore, FDA and its federal partners should work much faster to identify recommended alternative therapies and communicate them broadly to the public, especially the provider community. Wherever possible, the FDA and its federal partners should utilize outside subject matter experts when developing these recommendations or guidance for alternative therapies. For products on FDA's critical medications list, alternatives should be identified by the federal government prior to onset of a shortage, discontinuance, or interruption.

The AAP looks forward to working with FDA and others on the critical issue of drug shortages. Thank you for you for the opportunity to speak to you.