

# Preventing Pediatric Medication Dosing Errors with SafeDose<sup>®</sup>

Ensuring safe medication administration for children

A 2014 study revealed that a child in the U. S. receives the wrong medication or wrong dosage every eight minutes. Nearly half of these incidents are the result of improper dose or quantity, wrong administration technique, or incorrect preparation.

## **Infrequency of pediatric emergency events causes problems**

If you are an ED Director, nurse or physician, or a health care organization Quality Officer, there is no doubt that ensuring pediatric emergency dosing safety is one of your top concerns.

There are over 5,000 hospitals in the U. S., but only 150 pediatric hospitals. Nine out of 10 children in an emergency situation go to a non-pediatric hospital. However, pediatric emergencies make up only a small subset of events for these institutions. This infrequency leads to limited experience dealing with pediatric emergency dosing.

Medication dosing for children is primarily weight-based and even in today's EHR-enabled facilities, still requires an inordinate amount of manual math calculations to determine a proper dose. Combining a lack of familiarity with handling children's emergencies, the stressful situation of a chaotic ED, and the complicated process of computation often results in mistakes for vulnerable pediatric patients.

## **Current approaches have limited success**

ED leaders continue to try different methods to

limit the occurrence of medication dosing errors involving children in emergency situations. Some have implemented policies such as "Red Rules," where higher level medication safety processes are required for pediatric patients.

These heightened policies usually involve a second individual double-checking the math of the clinician who prepared the medication. Unfortunately, these procedures are time consuming, cumbersome, and not always effective. An engineering study found that humans make math mistakes about three percent of the time. It also found that for people doing double-checks, the error rate goes up to 10 percent. Add in a stressful situation like that found in a typical ED and math errors can occur one out of every four times.

Some organizations have incorporated dosing templates in their CPOE systems. These provide help only in the linear calculation of doses, but fail to include concentration, mixing, and preparation instructions or details of possible adverse reactions.

## **SafeDose<sup>®</sup> provides the solution**

SafeDose<sup>®</sup> takes the math out of medicine and enables you to ensure safe drug administration to children in emergency situations. Developed by Dr. James Broselow and Dr. Robert Luten, inventors of the world-renowned Broselow Tape, and key contributors to the creation of the specialty of pediatric emergency medicine, SafeDose<sup>®</sup> is a next

generation software solution that ensures providers consistently administer medication rapidly and accurately.

The web-based, mobile-enabled clinical support application standardizes and simplifies the complex process of drug administration to dramatically improve pediatric medication safety. It is the first pediatric dosage resource able to replace the need for complex thinking in critical ED scenarios with a visual decision-making tool.

With a simple scan of the U.S. National Drug Code (NDC) bar code of any medication using a desktop, smartphone, or tablet or with a few easy keystrokes, SafeDose® allows you to quickly determine the proper medication doses so you can deliver them promptly and accurately.

Clinicians in emergency settings are incredibly competent, but it is impossible for them to be 100 percent accurate when making the required calculations in split seconds under extreme duress. SafeDose® eliminates that issue, allowing them to focus on the other critical elements of care during these emergency situations.

### **Benefits of SafeDose®**

SafeDose® eliminates the significant risks caused by the gap between drug ordering through CPOE and final barcode verification prior to administration where nearly 40 percent of errors occur. The application presents the correct dose in both mg and ml by exact weight and indication. It provides dilution and delivery instructions, adverse reactions, Y-site compatibilities and appropriate flow charts.

SafeDose's nearly 300 customers use SafeDose® in many different acute settings, but almost all of them rely on SafeDose® to ensure safe pediatric dosing. These organizations understand the value of SafeDose® in providing a higher level of safety for pediatric medication dosing. SafeDose® enables clinicians of all skill and experience levels to feel confident preparing and administering medications to children in emergency situations.

SafeDose® has proven to eliminate errors and extra steps in medication preparation and administration in real-world settings and goes a long way toward

ensuring medication administration safety in pediatric emergencies.

### **About SafeDose**

SafeDose is dedicated to developing an international standard that ensures simple, safe, and effective acute drug administration. SafeDose® products and services are used by hundreds of thousands of clinicians daily furthering the company's mission to provide needed critical information to those administering acute care and to help them improve treatment, save lives, and simplify their jobs. For more information, visit [www.safedoseinc.com](http://www.safedoseinc.com).