

# Simplifying Acute Care Drug Administration with eBroselow's SafeDose

Eliminating drug delivery risks with the most trusted name in medication safety

The ability to rapidly and safely administer potentially lifesaving medications to acutely ill or injured patients is without question one of the greatest challenges in clinical medicine. Getting the dose, concentration, volume, and dilution correct 100 percent of the time for every drug, weight, and indication is daunting.

Treating children and adults in acute settings has become so complex that medical errors now rank as the third leading cause of death in the United States—right behind cancer and heart disease.<sup>1</sup> Mistakes in medication administration are the single most common type of medical error in hospitals. Even worse, during emergencies, half of all medication administrations are incorrect with 14 percent of those leading to harmful or fatal results.<sup>2</sup>

## *It doesn't have to be this way.*

There is now a way you can eliminate these risks and provide safe drug administration to patients in emergency and acute situations. Dr. James Broselow, inventor of the world renowned Broselow Tape and recipient of the Institute for Safe Medical Practices Lifetime Achievement Award, and his team at eBroselow has developed SafeDose - a suite of next generation reference tools that ensure 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 patient safety.

## **Acute care settings pose serious challenges**

Hospitals have developed structured, robust systems for ordering, dispensing, and delivering drugs in many care situations. A series of quality checks from the time the pharmacy receives an order and prepares the prescription until the clinician administers it to the patient ensures a secure safe process.

Unfortunately, those same safeguards are often strained in an acute care setting with unstable patients. In many cases, patients arrive suddenly in the ED needing meds or they may be lying in a room unconscious and the clinician must immediately take action. In those circumstances, there is no time to review the patient chart even if one exists yet.

SafeDose was designed to handle these chaotic, uncontrolled situations by eliminating the need for clinicians to manually execute complex calculations to determine safe medication dosages. By scanning the U.S. National Drug Code (NDC) bar code of any medication using a desktop, smartphone, or tablet, clinicians can quickly determine the proper medication doses and deliver them promptly and accurately.

<sup>1</sup> 2016 study from Johns Hopkins Medicine

<sup>2</sup> 2012 study from the University of Pittsburgh School of Pharmacy

### Taking the math out of medicine

Acute drug administration still involves memory, manual math calculations, and encyclopedic medical reference knowledge that is simply not practical during medical emergencies. According to studies, under normal circumstances the average human math error rate is three percent. That jumps to 25 percent in stressful situations like those found in the average ED.

Nurses in these 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 nurses to focus on the other critical elements of care during these emergency situations.

### Versatile technology offers multiple capabilities

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:

- Scans vials for clinical knowledge
- Exports a time-stamped log to the EMR
- Displays clinical/medication information at a glance
- Provides a secondary check

### SafeDose is a proven solution

eBroselow has proven to eliminate errors and extra steps in medication preparation and administration in real-world settings.

A recent study at the University of Kentucky School of Pharmacy concluded that using SafeDose with just ten minutes of training:

- Increased the accuracy of medication doses prepared during pediatric code simulations by 24 percent while eliminating clinically significant errors
- Reduced average medication preparation time by eight minutes per event

- Enabled nurses with less pediatric experience to prepare medications as quickly as those with more experience
- Improved the accuracy of nurses mixing medications with pharmacy consultation

### Based on a trusted history of innovation in safety

As an emergency room doctor in the 1980's, Dr. Broselow invented the Broselow Tape, a simple, but effective color-coded tool that determines body weight from body length and provides proper dosing and airway information for children. Dr. Robert Luten has performed pioneering work in the field of emergency medicine helping to create the specialty of pediatric emergency medicine in 1993.

Drs. Broselow and Luten spent nearly 10 years developing the underlying standards and content of SafeDose. They worked with multiple committees including groups of esteemed pharmacists and doctors to refine the product. Launched in 2010, SafeDose is now licensed to over 150 hospitals across the United States and Canada.

### About eBroselow

Headquartered in Southborough, Massachusetts, eBroselow is dedicated to developing a simple, safe, and effective international standard for acute drug administration. Co-founded by Dr. Broselow, Peter Lazar and Dr. Luten in 2010, eBroselow offers the latest medical innovations to improve care, increase treatment efficiency, and save lives.

For more information and to learn how eBroselow can help ensure safe medication administration in your acute care situation, visit our website: [www.ebroselow.com](http://www.ebroselow.com) or email [info@ebroselow.com](mailto:info@ebroselow.com).