

SafeDose Key Component of Queens Medical Center's New Pediatric Trauma Unit

Queens Medical Center

- Largest private hospital in Hawaii Member of The Queen's Health Systems family of hospitals
- Hawaii's designated trauma center--the first and only Level I trauma center in Hawaii.

Care Beds**505**

acute

28

sub-acute

Challenge

- Establishing a pediatric care unit in a primarily adult-centric hospital
- Nurses unfamiliar with handling medication administration for pediatric patient
- Time consuming, manual processes and math calculations for medication administration

Solution

- Full implementation of SafeDose
- Integrated SafeDose into workflow process and training program

Results

- Eliminated manual math calculations when preparing and administer medication
- Provides instant information on dosing, timing intervals, and adverse reactions
- Provides customized medication information for each patient at every step of trauma treatment
- Instilled high level of confidence in nurses for medication administration
- Automated, streamlined, and ensures the patient safety during medication preparation and administration.

**Automated****Streamlined****Patient Safety**

The Queen's Medical Center is a nonprofit hospital with a 158-year legacy of caring for the people of Hawaii and the Pacific Basin. A member of The Queen's Health Systems family of hospitals, The Queen's Medical Center is the largest private hospital in Hawaii licensed for 505 acute and 28 sub-acute care beds. Located in downtown Honolulu, Queen's serves as the major referral center for cancer, heart disease, neuroscience, orthopedics, surgery, emergency medicine and behavioral health, and has the only organ transplantation program in the State of Hawaii. Queen's is also the state's designated trauma center--the first and only Level I trauma center in Hawaii.

Primarily an adult centric hospital, Queens decided in 2016 to set up a pediatric unit to handle children's trauma victims that were coming in from the region. A key part of the new unit was establishing the use of SafeDose® to ensure safe medication administration for children.

Setting up the pediatric unit

To establish the new unit, Queens brought in Justine Tye, an Advanced Practice Registered Nurse (APRN) with more than 20 years of pediatric care experience.

"As the trauma center for the state of Hawaii, all pediatric trauma victims are brought to Queens from all the Hawaiian islands and the Pacific basin," said Tye. "However, as an adult-centric facility, they really didn't have the experience to handle many of these cases. They would stabilize the children and then send them to children's hospitals in the area. That was traumatic to the families. They decided they needed a dedicated pediatric trauma unit."

Under Tye's direction, Queens set up a four-bed pediatric trauma unit. She has been actively training the nurses in the ICU and pediatric unit on pediatric care including safe medication administration. She quickly implemented the use of SafeDose®.

"SafeDose® has been an essential component of the training in the unit," said Tye. "Since the nurses had been only dealing with adults, they were extremely apprehensive about caring for pediatric patients. SafeDose® has made the transition much smoother for them."

Making SafeDose® an integral part of the care process

Tye had previously worked at the Carolina Health System where the Broselow Tape and SafeDose® both originated so she was familiar with the effectiveness of SafeDose®.

“SafeDose® had been in place at Queens, but they weren’t really using it,” said Tye. “They didn’t realize the potential of it. We quickly began a pilot program to help implement SafeDose®. All of my training in pediatrics centers on SafeDose®. I went department by department on a campaign to get everyone familiar with it to show them how powerful it is. I encouraged them to go to the SafeDose website since there is so much there that is useful for us as providers.”

Tye conducted a survey asking the nurses what they were most uncomfortable with when handling pediatric patients. The majority cited math calculations when preparing and administering medications including conversions from mg to ml, IV fluid rates, delivery time intervals, and potential adverse reactions.

“Once I showed everyone that SafeDose® addressed all these issues, they became very excited about using it,” Tye said.

Prior to the use of SafeDose®, whenever there was a pediatric emergency, the nurses referred to a 12-page resuscitation guide from Micromedics.

“A 12-page guide is too much to refer to in an emergency,” said Tye. “With SafeDose®, you simply enter the weight of the patients and all the resuscitation drugs come up. It tells you the dose in mg and ml which eliminates any math and tells you exactly how to give the medicine. Scrolling down to the second page gives you all the RSI and seizure meds and how to administer them. Scrolling to the final page gives you a list of the sizes of equipment you may need depending on the weight of the patient.

“SafeDose® also aligns with the color coded Broselow code carts that tells you which drawer contains all the supplies you need,” Tye continued. “SafeDose® takes all the guesswork out of the process for the nurse which is great since that’s what was causing most of their discomfort.”

Before SafeDose® became the required way to administer meds, the process for handling pediatric emergencies was laborious and time consuming, requiring manual math calculations and limited coordination from department to department.

Now it’s mandatory that when a pediatric patient comes in the nurse immediately goes to the resuscitation feature in SafeDose®, prints out the results and makes them available at the patient bedside and to the attending

physician. This custom printout follows the patient from the trauma bay to CT, to the ICU. It provides the staff in each of these areas all the pertinent information in case there is a need to code the patient at any point.

SafeDose® is now in place throughout the Queens facility both for inpatient and outpatient settings. All the nurses have SafeDose® on their mobile phones and are able to NDC codes to make preparing and delivering meds even easier.

Nurse confidence one of many benefits of SafeDose®

In addition to automating the medication administration process, SafeDose® has instilled a layer of confidence when treating pediatric patients that had been missing.

“Prior to the use of SafeDose®, nurses were tentative and would look for assistance when a pediatric patient came in,” said Tye. “Now with SafeDose®, they have a tool that tells them exactly what to do and how to do it, so they can quickly treat patients on their own. It’s a much more organized, controlled, calm environment. Nurses are now more confident knowing that they are administering the correct dosages more quickly and efficiently. They are better able to focus on patient care.”

“The SafeDose® solution is perfect,” said Tye. “We use it for every pediatric patient that walks through the door. The changes I have seen in this hospital system thanks to SafeDose® are incredible. I love SafeDose®. I think it’s amazing and wonderful. I would like to tell the whole world to show them how useful this product is and how much it has changed the culture of our hospital.”

Epic integration next step

The next step for Queens is integrating SafeDose® into its Epic EMR. SafeDose recently partnered with Epic to integrate a set of FHIR-based API’s which connect the two systems without the need for any interim keyboarding.

“Once we integrate SafeDose® into Epic, nurses will simply be able to scan the meds and it will automatically time stamp the encounter and populate the Epic chart,” said Tye. “It will make using SafeDose® and providing safe medication administration even easier.”