

FEATURE STORY

Pedi-Ed-Trics: A Mission to Improve Pediatric Care

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“Pediatrics can be complicated and scary,” says Lisa DeBoer, NREMT-P, PI, CET, and President/CEO of Pedi-Ed-Trics Emergency Medical Solutions.

“You could see when it came to a kid, everyone was terrified. Everyone’s heart rate, blood pressure was through the roof. It wasn’t just the EMTs and paramedics, you could see the docs and nurses who were stressed in the ER. If we can make it more simple and accessible for people to practice, they’ll get good at it. The outcome is ultimately saving kids’ lives.”

That is the mission of Pedi-Ed-Trics, which Lisa DeBoer, a former medic, and her husband Scott DeBoer, a former University of Chicago flight nurse with significant experience transporting pediatric patients, started in 1996.

The top concern in pediatric emergency medicine is medical errors, with children being overdosed by “well-meaning practitioners,” Lisa DeBoer notes. “Decimals make a difference. If it’s a kid and you moved the decimal point the wrong way, you’ve just killed them.”

Another top concern: missing airways with intubation.

“It’s not a problem to miss the intubation – the problem is you don’t recognize that you missed it,” she notes. “People are using the wrong-sized tube.”

Pedi-Ed-Trics joins the Broselow-Luten and Hantevy systems to mitigate those challenges, Lisa DeBoer says.

Combatting Challenges with Pedi-Ed-Trics Education



Lisa DeBoer provides education. (Photos: Lisa DeBoer)

The organization’s ‘In Seconds’ pediatric training simulation kits – among other products – aims to provide easy-to-remember pediatric emergency information during medical seminars and skill labs designed for physicians, nurses, medics, and respiratory therapists to be recalled and applied quickly in high-stress situations ultimately reducing errors and saving lives.

Another product: life-sized full-color foldable boards, ‘Mani-Kids,’ with real children’s images representing some of the color zones of the Broselow-Luten color-coding system used to practice basic to expert level scenarios.

The water-resistant Pedi-Wheel is the size of a compact disc, divided into ages and the colors of the Broselow-Luten and Handtevy systems, providing critical information as it is turned regarding the ideal body weight, systolic blood pressure, heart rate, respiratory rate, endotracheal

tube size, ET tube secured and tiny tubes – information needed to successfully perform during a pediatric emergency.

The reverse side shows the common medications used in emergency medicine with pediatric patients.

“It’s not meant to completely replace [Broselow-Luten](#) or the Hantevy system,” says Lisa DeBoer. “It’s a quick cheat sheet you have in your pocket that in the event you don’t have the technology or the ability to go on your phone while you’re there.”

The DeBoers had been approached at an EMS World conference a few years ago by someone requesting they provide their educational materials in Spanish.

“We have so many countries asking for us to turn our products into other languages,” says Lisa DeBoer. “We’re addressing the language barrier issue for educators trying to teach so many different kinds of students. We’re trying to address a product we can make easy for educators to use but that has no words, which is super challenging because sometimes even a picture can mean something different in different languages.”

Lisa DeBoer says she has found “being terrified of taking care of really sick kids” is a universal sentiment in her international travels. She met a German doctor who talked about how in their EMS system a doctor will go along with the paramedic and in one case, a physician who did not provide care for children on a regular basis or normally work for EMS had accidentally administered an overdose of Lidocaine, leading to the child’s death.

Traveling the World



Lisa DeBoer visiting Spain to share Pedi-Ed-Trics products with other EMS providers.

The DeBoers visited Spain to determine if their products would be beneficial.

“Castilian Spanish is more to us like proper English,” says Lisa DeBoer. “Getting it right for Spain was critical if it’s going to be recognized as [a] professional medical reference tool. We’re getting ready to go into our prototype to hopefully start printing.”

The couple also visited a poverty-stricken area of Morocco to show emergency workers with limited resources the products to determine their usefulness. They did want it, translated into French. While visiting Switzerland, the DeBoers received help with the French translation.

Jean-Cyrille Pitteloud, M.D. is an anesthesiologist in Switzerland who also serves as the medical director for two EMS services.

“The Scenarios in Seconds gets you and your students through a variety of pediatric scenarios using real-life size posters and a wealth of very realistic cases,” he says. “Most schools and EMS agencies have two or at most three different sizes of pediatric mannequins which makes the use of most dosing aids quite unrealistic.

“Working on these realistic posters and their stories is both fun and challenging, and will make you and your students feel at ease with all aspects of pediatric emergencies.”

Positive Feedback

Lisa DeBoer says she has received a significant amount of positive feedback on Pedi-Ed-Trics education, including one EMS worker who credits it for helping to save a baby who was in full arrest after falling into the pool but was fully resuscitated.

“I nearly started crying,” she says. “It was one of those moments where you get to hear people say that and you think, ‘My gosh, we did this. There was an actual child that he attributed to what we’re doing that made all the difference.’”

That educator was Benjamin Rohde, Lieutenant of EMS Training for the North Collier Fire Control and Rescue District in Naples, Florida. He notes the North Collier Fire Control and Rescue District (NCFR) implemented the use of Scenarios in Seconds approximately two years ago to alleviate the training department's workload and enhance the department's understanding of pediatrics in EMS.

"Given the majority of the population in our area comprises adults with children accounting for less than 18 percent according to the 2021 US Census Bureau, our pediatric EMS calls are relatively infrequent," Rohde says. "To ensure the preparedness of our first responders and the delivery of optimal patient care in such situations, we sought to enhance our knowledge in pediatrics."

Scenarios in Seconds



Lisa DeBoer at the Hospital de la Santa Creu i Sant Pau.

One component of Pedi-Ed-Trics, Scenarios in Seconds, has been extensively utilized by NCFR across multiple areas within the department.

"The pre-designed scenarios facilitate easy setup for crews, enabling them to practice and develop comfort and confidence in anticipation of actual emergency calls," says Rohde. "Over the past two years, NCFR has placed significant emphasis on pediatric training in line with the state of Florida's prioritization of this topic.

"To further this objective, we designated a 'Pediatrics Champion' responsible for educating our department on pediatrics and exploring new research studies and equipment. This individual played a pivotal role in researching both Scenarios

in Seconds and Handtevy."

NCFR has implemented both the Handtevy Mobile app for all first responders, using Scenarios in Seconds in assisting crews in utilizing the Handtevy system effectively, says Rohde.

"This was demonstrated during a call in February 2023, where our crews responded to a one-year-old drowning incident. Drawing on the training received during the Handtevy roll-out, crew members were able to pre-plan their response based on dispatch information," he says.

"On arrival at the scene, they encountered an unresponsive, pulseless infant but were equipped to provide CPR and other advanced life support procedures. Their diligence paid off when they achieved return of spontaneous circulation for the infant, subsequently facilitating transport to the hospital. Encouragingly, the infant was ultimately discharged from the hospital and reunited with their family."

Lisa DeBoer recounts a time when John R. McFarland, MS, EMT-P, NCEE, PI, a Jay County EMS training officer in Portland, Indiana, visited her company at its booth at a NAEMSE conference and said he hated teaching pediatrics.

"My hang-up with pediatrics is that those patients are high acuity and low volume," McFarland says, adding the closest appropriate pediatric treatment center to his agency is an hour away, which increases the stress even more and one percent of the call volume was pediatrics with all of them transported to the emergency department.

The pediatrics curriculum represents a very small part of the overall curriculum, making it nearly impossible to meet the certification requirement, he says.

"The straw that broke the camel's back for me was a survey I had to complete for the children's side of EMS I was required to represent," says McFarland. "Our system was labeled negligent in preparation for pediatric patients. That word 'negligent' made me hate pediatrics even more."

He purchased the Scenarios in Seconds product. The following year, he returned to the booth and indicated he loved teaching pediatric emergency medicine.

"Now I have hundreds of pediatric scenario cards and pediatric medication vials labeled for the smaller doses," McFarland says. "These labels allow me to have simulations for the medications my service carries, not just what some vendors think we should carry. We cover a pediatric topic in every meeting

and in-service training. I now hear my employees and students talking like pediatric professionals. This year, we celebrated our highest first-time successful passes on the National Registry EMT exam ever at a shocking 89 percent.”

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