Thinking Big for the Smallest Patients:
Innovation in Pediatric Technology

Gavin Stern
Kevin Ferguson, a clinical engineer at Cincinnati Children’s Hospital Medical Center, works each day to ensure that children at his hospital get the best medical care—with the best technology—possible. There’s just one problem. The technology that’s available to him, while the best in the world, isn’t necessarily what’s best for his patients. That’s because most pediatric health technology wasn’t designed specifically to meet the needs of children.

“Most technology is designed for adults and then aimed at the children’s world,” Ferguson said. “But children are constantly changing—their heart rate, respiratory rate, growth, and size. When you develop something, you need a constant to hit. The constant is likely to be adults because their bodies are mature. The cutting edge that I’ve seen is what we’ve learned about how children are different from adults.”

Even at the finest children’s hospitals in the United States, healthcare technology management (HTM) professionals are doing the best they can to adapt equipment to work for children.

“About 90% of the drugs used in a pediatric neonatal setting are off label. The statistics are even higher in devices. Jerry-rigging an adult device is the only way in many instances, but it’s not preferable. In our domain, to make sure devices are available for children—that’s already a breakthrough,” said Kolaleh Eskandanian, PhD, vice president and chief innovation officer at Children’s National Health System in Washington, DC. “Too often, the devices that children need are simply not available, which is why clinicians find themselves improvising.”

**Improvising in a Small Market**
Adapting healthcare technology that’s not specifically designed for children can work well in many cases. For example, modern infusion pumps perform better for children today than in the past because they’re capable of delivering drugs at very small doses in a precise manner. The improvement gets even better when that precise equipment is paired with software such as a drug library to help ensure dose accuracy within the narrow range that a child needs, Ferguson said.

But often, children are on the receiving end of technology that doesn’t meet their needs as well as it could—a situation that frustrates clinicians who are doing the best they can with what they have. Often, the gap is filled by adding pediatric accessories to adult devices.

“In some areas, equipment will work in all environments. Unfortunately, where it is not the case, it is only after the adult sector solutions are matured that the products and associated accessories are eventually scaled to the pediatric sector,” said Pamela Arora, senior vice president and chief information officer at Children’s Health in Dallas, TX. “When you consider the intricacies of
treatment of pediatric patients, it doesn’t make sense to deliver devices to a population for whom the device isn’t engineered. It’s like trying to tailor an adult suit down to fit a small child—the idea may seem good, but in practical execution, it doesn’t always work as well as intended.”

The dearth of pediatric-specific medical devices isn’t due to a lack of will or imagination on the part of medical device manufacturers, according to Ken Martin Brady, a pediatric cardiovascular anesthesiologist and chief of the research division at Texas Children’s Hospital in Houston. Rather, it’s the result of the market, or lack thereof, for producing these devices. Of the thousands of hospitals in the United States, only about one in 20 are specifically for children—about 250 total, according to the Children’s Hospital Association. That’s a window into the size difference between pediatric and adult populations.

Therefore, although clinicians such as Brady see a “huge” need for more development in pediatric medical devices, even when companies decide to develop a pediatric-specific device, they’re often faced with overwhelming challenges in finding funding for it because the market—and potential return on investment—is far smaller than for an adult or general use device, Brady said.

The market crunch is further compounded by the more complicated nature of pediatric illnesses, which tend to be more variable than adult illnesses.

“We have lots of sick children, but they’re not sick with the same thing. There’s a lot of diversity in their illnesses,” Brady said. “For the heart, when a child is in the hospital, it’s usually because of a congenital malformation or other disease that likely isn’t present among adults, and those malformations give different illnesses.”

While Brady may be involved in 75 neonatal heart surgeries a year, the patients within that group may well have a dozen different diagnoses. The adult population, meanwhile, often gets sick for more consistent reasons. Coronary artery disease, for example, can result from a poor diet and lack of exercise. The homogeneity of adult diseases makes them easier to study, so data can be collected more readily and new therapies can be developed.

“A study can be very easy to do in adults but be difficult for pediatrics. With adults, you can go into a hospital and find hundreds of patients all having the same surgery, which you can study,” Brady said. “But for pediatric patients, you may only have a few newborn baby heart surgeries each year. Compare that with thousands of coronary artery bypass surgeries done at an adult center. It’s difficult to get recruitment to power the study, so it’s likely that multiple pediatric centers would need to get involved.”

All of those underlying issues mean that studying pediatric conditions in the context of a new medical device is much more difficult—and expensive—compared with developing a device that’s meant for adults. Ultimately, the latest technological advances don’t make their way into the pediatric space, leading pediatric clinicians and HTM professionals to either do the best they can with older technology for children or try to downsize an adult device to fit a smaller body. Neither scenario is ideal.

As an example, patients in need of a heart transplant can now survive for months using a modern mechanical heart (i.e., a ventricular assist device). In some cases, the artificial heart is left in permanently because the patient is not a good candidate for transplant. “Those devices are only made for certain sizes, and you can only go so far down,” Brady explained. “In older children, we can put in an adult device, but as they get smaller, you just can’t. The fluid dynamics change. What’s available for children is an older technology, the Berlin heart, which is nowhere near as effective. The technology for children just has not caught up with what we can use for adults.”

About a quarter of children who receive the older mechanical heart technology suffer from a stroke that’s attributable to the heart, Brady said. And although the National Institutes of Health (NIH) has worked to provide some funding for pediatric ventricular assist devices, making them work in such a small setting would probably require an entirely new device design.

“What venture capitalist is going to throw that money at it when the market is always
going to be so much smaller than for the adult device?” Brady said. “A lot of medical device companies go the extra mile to make a smaller pediatric version of what they do, but I believe they’re doing this for philanthropic reasons.”

**The Passion to Cure**

One major voice in trying to bridge the gap between pediatric and general use medical devices has been the National Capital Consortium for Pediatric Device Innovation (NCC-PDI), which holds a national pediatric medical device competition in conjunction with a symposium on pediatric innovation, using funds from the Food and Drug Administration (FDA) through its pediatric device consortia grant. The competition, which also is supported by the Sheikh Zayed Institute for Pediatric Surgical Innovation at Children’s National in Washington, DC, helps nascent medical device companies get over the initial funding hump so they can address unmet pediatric device needs.

“The companies attacking many of these problems are often startups and entrepreneurs, and we want to help support them,” said Eskandanian, who facilitates the competition as the NCC-PDI’s principal investigator and works with past winners on an ongoing basis. “We also work to increase the chance of bringing these innovators in front of investors and build buzz to get connected to future partners.”

During the competition, companies are evaluated based on how much a device alleviates an unmet need in the pediatric medical device market, as well as the qualifications of the company’s management team. In addition to these two important aspects, the management team also is evaluated for what Eskandanian calls “entrepreneurial grit.” They need to understand—and be ready for—the arduous path to commercialization for a pediatric device, which includes having sound regulatory and reimbursement strategies.

**Lighting the Way**

Deciding to design and market a medical device that’s specific to pediatrics is inherently a choice made out of a passion to help the children—a patient population that is not just smaller in size physically but also a narrower group of potential users.

“For entrepreneurs in the pediatric space, I’ve found we’re often driven by a personal experience as a child or from one of our own children. You don’t see many people who are in this because it’s the easiest area to innovate in healthcare—because it isn’t,” said Ryan Shelton, CEO and founder of PhotoniCare, a medical device company that has built a handheld imaging device to see through the eardrum into the middle ear. “If you’re in pediatrics, it’s because you want to be there.”

Shelton, a biomedical engineer by training and NCC-PDI awardee from 2015, started his company in 2013 after developing a light-based method for visualizing the middle ear, called optical coherence tomography, at the University of Illinois at Urbana-Champaign (UIUC). Around the same time, Shelton became a father, and his son suffered from recurring, severe middle ear infections throughout his first two years of life.

Seeing how those infections affected the quality of life for his own child led Shelton to focus his efforts on developing a better way to assess middle ear disease. His company, now based out of the EnterpriseWorks incubator at UIUC, is working to produce a low-cost, handheld imaging platform called ClearView. The goal of the platform, said Shelton, is to “fundamentally change the way physicians manage middle ear infections.”

But a novel idea is not enough in the pediatric device space. “It’s difficult to go out and get funding for a pediatric application. It carries with it some prejudices among the investment community where it’s automatically considered to be small market. That’s because it often is,” Shelton said. “That can be a hard sell. Even for a pediatric product like ours that does have a big market—ear infections affect millions of children each year and represent a $10-billion burden in the U.S. alone—we still have to fight against that preconceived notion.”

How, then, does one fight through these obstacles to get new technology into the ears of millions of children?

In Shelton’s case, his company has succeeded through a combination of angel investors who were willing to support
early-stage companies, a supportive academic environment at the UIUC that provided early grants, as well as several grants from the NIH and FDA. After his company started to show success in development and began producing prototypes, investment picked up. PhotoniCare recently closed a financing round to obtain FDA clearance and will be closing the next round of funding with the intent of commercialization in early 2019.

**Seizing the Brass Ring**
The medical device ecosystem doesn’t focus on or invest in life-saving technologies for children as much as it does for adults—and it isn’t fair, said Eric M. Stone, cofounder and CEO of Velano Vascular, which won an NCC-PDI award in 2014.

Stone has a clinical fear of needles, called trypanophobia, that he developed after his experiences being treated for Crohn’s disease as a teenager. He remembers the frequent needle sticks as one of the most traumatic parts of being in the hospital and channeled that passion into building a company that developed a system to reduce the number of needle sticks for blood draws.

“I lived the hospital experience as a kid. Now, as a parent, I think about what happens if my kids are in the same situation. I want them to have the very best medical technology,” Stone said. “It’s not appropriate for us to just be developing technology exclusively for the adult population.”

Stone teamed up with cofounder Pitou Devgon, MD, the company’s chief medical officer and inventor, to develop a family of products. The aim of the first product, called PIVO, is to reduce the number of needle sticks needed to draw blood from a patient in the hospital—what Stone calls a more “humane approach” to getting blood from the body. The product received FDA clearance and is now in the early commercialization phase.

“Now we have kids who sleep through blood draws,” Stone said. “I think that paints a pretty clear picture.”

When designing a medical device for a child, it’s important to keep in mind that, because development is actively occurring in the child’s body, a smaller version of the device isn’t necessarily the answer. Now, consider that moving target alongside the difficulties of studying the device: the less...
abundant infrastructure to conduct studies, an understandable desire to be more risk averse when working with children, and the challenges of finding the right circumstances to evaluate how well a new technology works.

“There are fewer clinical sites than for adults and fewer principal investigators to work with. It just takes a little more sleuthing, a little more persistence, and a little more energy and passion around outreach to figure out who are the institutions, thought leaders, and investigators that are open to evaluating new technologies in children,” Stone said. “That’s where you have thought-leading institutions like Children’s National and others who have the infrastructure in place for those types of clinical studies and assessments.”

When it comes to pediatric devices, finding those partnering institutions is like seizing the elusive brass ring, Stone said.

“That’s where children’s hospitals on the cutting edge of innovation engage with companies like ours. That’s why we need institutions to create the space to encourage development in this area,” Stone said. “The challenges are not insurmountable, but there is additional complexity, effort, time, and cost. This is not for the faint of heart.”

From a Mom’s Brain to Our World

Entrepreneurial grit was present in spades for Jules Sherman, an industrial designer who developed her company, Maternal Life, LLC, around a product (Primo-Lacto) to help women who cannot breastfeed their newborn babies. The product captures 75% more colostrum than standard hospital practice by adding an adapter to any hospital-grade electric breast pump and introducing a hand-expression funnel. Both products connect directly to an enteral feeding syringe (slip fit or ENFit), providing a closed system for colostrum collection and feeding.

Sherman, who worked in the consumer product design field for 15 years before she had her first child, saw this as a way to combine her professional expertise and personal insight to improve the experience and health of mothers and their babies.

“I never had the opportunity to see what happens in a hospital until my daughter and I were patients. It was evident there are a lot of ‘low-hanging fruit’ issues in a standard U.S. hospital birth scenario,” Sherman said. “My breastfeeding experience in the hospital and at home was very challenging. It’s not rocket science why women give up on breastfeeding; it’s because of the message many women get in the hospital when they’re just starting out. If women don’t have a good experience, they won’t keep trying.”

Maternal Life succeeded in acquiring four U.S. utility patents, and Sherman’s company was ultimately acquired by Fairfax, VA–based Lansinoh Laboratories, a subsidiary of Pigeon Corporation, in March 2018 following a clinical trial and FDA clearance. But it took a truckload of grit—and about $120,000 of Sherman’s own money—to get over that finish line. Most of the money spent from Sherman’s own pocket was for intellectual property costs. The rest of her funding came from a variety of sources, including a number of grants.

Sherman developed Primo Lacto while studying design as a graduate student at Stanford University on a full scholarship. After creating several iterations of the system, Sherman won a New England Pediatric Device Consortium (NEPDC) grant that paid for a clinical focus group study. To make that study happen, Sherman cold-called 10 hospitals, then subsequently ran eight focus groups. Three hospitals were selected at which to test the product in a clinical study.

Due to the success of the focus group study, Sherman was awarded a second grant from the NEPDC to pay hospital study fees, build her first set of molds, conduct biocompatibility tests, obtain insurance, and run the human study. The NEPDC helped connect her with a factory that complied with the FDA’s good manufacturing practice requirements and provided manufacturing guidance.

Along the way, she met with lactation experts, neonatologists, and pediatricians at the participating testing hospitals to address product deficiencies, as well as sought regulatory advice from the FDA. Finally, a third grant awarded by the NCC-PDI paid for a second set of molds, incorporating the new ENFit syringe connection.
“It took five years to get to market due to funding issues. When I was invited to pitch to angel investors in the life science space in Silicon Valley, I learned that these groups are dominated by men. Understandably, most of them were not sensitive to the problem. I figured out that grants and my own money were the best route,” Sherman said.

“Getting this product from my brain to the world was one of the hardest things I’ve ever done in my life,” she continued. “There were so many barriers, and it cost so much money. There were many days I thought about giving up, but at a certain point I was so invested that I knew I had to follow through—not just for me, but for all the moms who would experience the same challenges I did.”

The tough road hasn’t stopped Sherman. Today, she’s working on additional products related to delayed cord clamping, pelvic exams, and postpartum pain.

“We can develop processes to enhance patient experience and make new moms successful. Products can change behavior—and behaviors can change the world,” Sherman said.

**Moving the Needle**

A need exists for spurring development of devices that are specifically designed, evaluated, and approved for children, according to Vasum Peiris, MD, chief medical officer of pediatrics and special populations at the FDA’s Center for Devices and Radiological Health.

“Generally, whether a device is intended for an adult or a child, we evaluate a spectrum of scientific evidence and consider the benefit-risk profile for each device and the population that it’s intended to serve,” said Peiris. “That being said, we have several programs in place intended to help promote pediatric medical device development.”

The FDA’s efforts to encourage pediatric medical device development have included issuing guidance that clarifies the types of information necessary when developing devices for children, appropriate protections for children, and options for leveraging existing clinical data for extrapolation to pediatric uses of medical devices, as well as adapting general use devices so they work for a pediatric population. The FDA also has programs that account for the challenges surrounding pediatric device development, such as the humanitarian device exemption approval process and the pediatric device consortia program—which helps fund the NCC-PDI competition and other efforts.

“The area of pediatrics has always been a field that’s on the cutting edge of medicine.

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**Tips from Pediatric Medical Device Entrepreneurs**

- **Talk to the people whose problem you’re solving.** “Make sure you’re solving a problem in the right way,” Ryan Shelton of PhotoniCare said. “If you’re not solving it for your customers, you’re not going to be successful.”

- **Find mentors in the industry.** “You need someone who can help shepherd you through, even if it just means a coffee or a beer each month with someone who really knows the industry can really help you navigate,” Shelton said.

- **Protect your intellectual property.** Make sure the claims in your provisional patent can be defended. “This can be one of the biggest costs, but your product is worth nothing without it—you have to protect yourself from those who want to copy you,” said Jules Sherman of Maternal Life, LLC.

- **Make sure you understand the process of getting to market,** including regulatory advice, FDA filling, biocompatibility reports, and establishing a quality system process with factories.

- **Know the costs in the beginning, and figure out how to pay for it.** “That may mean bootstrapping it yourself, looking for grants, or going for angel investments,” Sherman said.

- **Surround yourself with people who have a vision to help others.**

- **Identify investors who are looking for human impact in addition to financial return.** “If the primary focus of your investors is financial return, then pediatrics is a very challenging space in which to work,” said Eric M. Stone of Velano Vascular.

- **Find forward-leaning institutions to challenge you and create a safe place to learn.** “Don’t be afraid to learn, refine, pivot, try, refine again. Most people won’t get it right the first time around,” Stone said. “Your idea is just the start of the process to get to a better therapy.”
This is a field where you really see the benefits as children grow throughout their lives,” Peiris said.

Improving the Pediatric Experience
HTM to the Rescue
In addition to knowing how health technology is designed and administered, HTM professionals working in the pediatric field are instrumental in adapting technology built for an adult and making it work for a child—who is smaller, still developing, and probably very sick.

For HTM professionals like Dustin Telford, clinical engineering manager at Children's Hospital & Medical Center in Omaha, NE, it takes an extra level of care to ensure that pediatric equipment works the way it should.

“Sometimes, manufacturers are restricted in how they get an initial approval for how they came to market for a device, such as for a certain patient weight. But our children may be underweight, for example, due to an illness. We have to be careful how we change or test equipment so it will be safe for our patients,” Telford said. “Children usually have a higher heart rate. A preventive maintenance (PM) procedure may be for a narrow band around average blood pressures or heart rates, whereas a neonate will be very different.”

Equipment may not have been specifically approved for a pediatric environment, but it’s the only thing available. For example, extracorporeal membrane oxygenation—a pump that works as an artificial lung by oxygenating blood and returning it to a patient—is heavily used in pediatric environments but was designed for adults.

“Our perfusionists and physicians will need to determine if it’s an appropriate therapy and, if so, how to adjust the equipment. They’ll have a different baseline for blood pressure, heart rate, and so on,” Telford said. “A challenge for HTM is to make sure that the equipment is sensitive enough or has limits in place that won’t exceed a normal pediatric patient’s blood pressure, for example. We have to make sure the limits are there to make sure the patient isn’t affected by too high a pressure.”

Knowing how to adapt this equipment for pediatrics is based on a body of knowledge that’s shared by HTM staff through collaboration among children’s hospitals across the country.

Maintaining pediatric healthcare technology isn’t really all that different than working with adult equipment, Telford said, often because it usually isn’t fundamentally different from the adult equipment. But also, despite what one may think of children roughhousing with expensive hospital machinery, children tend to understand and comply more than you’d think, he said. However, more frequent PM programs may be needed to ensure that devices are able to operate at tighter tolerances.

Value of Imagination
Often, rather than the equipment itself being cutting edge—pediatric innovation is about being on the cutting edge of creating a positive patient experience.

This can be as simple as dressing up an infusion pump to look like a giraffe, as is the case at Children’s Hospital in Omaha. In a pediatric hospital’s radiology department, a procedure like a computed tomography (CT) or magnetic resonance imaging (MRI) scan, which can be a terrifying experience even for adults, can potentially be transformed into a positive adventure for a child.

You don’t need complicated equipment or an expensive design to create that experience—you just need to use your imagination, said Doug Dietz, innovation architect at GE Healthcare. Dietz develops GE’s Adventure Series, which is designed to make imaging technology more inviting for pediatric patients at the University of Pittsburgh Medical Center; University of California, San Francisco (UCSF) Medical Center; Children’s National Health System; Lurie Children’s Hospital of Chicago; and other facilities.

“It’s so tough for children and their parents to get through a more adult hospital experience. We have to do many different things just to allow them to get through the experience, especially in radiology, where they are going into big MRI and CT scanners,” Dietz said. “While the equipment stays the same, we look at how we can make the experience different. We like to think about how we can
affect the conversation in the car ride on the way home. Will they think of a yellow submarine ride?”

To develop these innovations, designers like Dietz engage in immersive workshops, spend time with children and parent advisory boards, collaborate with children's hospitals around the country for best practices, and engage with staff at the Betty Brinn Children's Museum in Milwaukee, WI, to better understand the developmental needs of children.

“We learned at UCSF, for example, that kids loved the cable car experience from San Francisco. So, we made that into an experience for the MRI scanner. We also took inspiration from the marina with seals and other sea life,” Dietz said.

“Spending time with the kids, we learn two main things,” he continued. “First, that we can do things similar to what they’ve seen before. An MRI scanner is noisy and so is a cable car. Second, that there are a lot of kids who are sick who have never had a chance to have experiences like their siblings. Even though the MRI machine wasn’t a real cable car—they still get to have the cable car experience.”
Ensuring that healthcare technology is safe and effective when treating pediatric patients is vitally important; however, it’s not the sole focus. Working to give children a positive experience with the technology can be just as crucial, not just because it reduces trauma for them and their families but also because it’s important for the child’s healing and future outlook on the healthcare system.

“In healthcare, we sometimes get complacent with ‘it is what it is.’ But we need to make big changes to make the patient experience better,” Dietz said. “Families are struggling to get through these speed bumps in healthcare. We can lower them if we take some time to understand what those issues are, work on them, and make healthcare way better.”

Ultimately, HTM professionals and other frontline caregivers set the tone for children’s experiences. Whether they realize it or not, they can be the deciding factor between making a large, undulating MRI machine a scary experience or a positive one.

For HTM professionals in particular, it’s important to understand how they can influence the experiences of children and their parents. That means maintaining a demeanor that puts parents at ease—if they’re comfortable, then the child will be more comfortable—as well as knowing how best to communicate with both parties.

“You have to be able to explain the equipment to parents and children. If you don’t have those communication skills, you need to learn them,” Ferguson said. “Today’s HTMs do a better job talking with parents, to explain the equipment, so they relax more when we walk into the room.”

Looking Toward the Future

Although challenges persist in the development and adaptation of pediatric healthcare technology, the future is bright. One growing area for children is telemedicine programs, which seek to keep children out of the hospital and help deliver care where they live, learn, and play.

“With healthcare and health records extended through telemedicine and remote patient monitoring, we’re able to deliver care to children beyond our hospital walls,” Arora said. “This includes connecting into the school setting through school-based telehealth, connecting to remote hospitals through the TeleNICU and TeleER programs, conducting virtual visits with patients in the home, and using remote monitoring tools for asthma and transplant patients.”

In one example, pediatric patients who have undergone a liver or kidney transplant are connected to clinicians each day. The remote system measures patients’ blood pressure, weight, and other vital information that requires close monitoring after they are discharged. Communication between the child’s caregiver and the clinicians takes place over real-time video messaging—and helps ensure that issues are found and corrected before a health crisis occurs.

Another area that has helped transform pediatric care through technology is the

The Children’s Health School-Based Telehealth Program provides in-school virtual consultations with physicians through the use of mobile telehealth carts. Using advanced, encrypted telemedicine technology, the telehealth carts allow children at participating schools to be connected with a pediatrician or pediatric nurse practitioner. Images courtesy of Children’s Health (Dallas, TX).
concept of gamification, or finding creative ways to make a game out of, for example, occupational therapy or staying still during an otherwise frightening procedure.

“Some of the equipment used to ask children to stretch their arms and check ranges works by using a video game board, where we ask them to catch a star or move an object,” Ferguson said. “It works so well because it engages the children on their thought level.”

GE Healthcare is working on ways to integrate gamification and virtual reality into its designs, especially in the home environment. By using a mobile phone app and placing the phone in front of the child’s eyes with a head strap, the child learns to play a game—staying still to prevent a bucket of water from spilling.

“The game allows the child to prepare themselves for their imaging scan by learning how to hold still,” Dietz said. “Then, on the day of the scan, the technologist can access what level the child is on. They work with the child to continue playing that game that they learned at home during the scan.”

GE also is exploring ways to personalize a child’s imaging experience based on his or her preferences. The child picks the experience she or he wants in the waiting room (e.g., seeing hot air balloons), and the image is projected into the room where they will have the imaging scan. These personalized choices get children excited about the experience rather than dreading it.

“I’ve seen kids in the waiting room asking the technologist, ‘Is it my turn yet?’ I think—this is a radiology department!” Dietz said. “But the kids, they can’t wait to see the environment that they’ve created.”

The field of pediatric healthcare technology faces profound challenges to overcoming a smaller market, a smaller patient, and an ever-changing physiological landscape. Despite these obstacles, those who work in the field are moving into the future guided by the enormous amount of passion, empathy, and ingenuity that pediatric patients deserve.

Tips for HTM Professionals When Working with Pediatric Patients and Parents

• Put yourself in the child’s shoes. Consider what might concern a child from his or her point of view.
• If something could be scary, build a story around it. For example, a head coil used in an MRI procedure could be called a “crown” or a “racing helmet.”
• ‘Make the equipment disappear.’ “Medical jargon doesn’t do well with adults—and it’s even worse for a child,” said Doug Dietz of GE Healthcare. “The story helps things make sense for them. Try to make the equipment disappear.”
• Dispel fear of the unknown. “This can start by explaining the experience in the waiting room. It reduces anxiety for the child and the parent,” Dietz said. “But determine what the key elements are. You don’t want to overload them.”
• If you’ve got the child, you’ve got the parent. “It works both ways. The children and parents will feed on each other’s comfort,” Dietz said.
• The simplest language is the best. “It doesn’t mean that people don’t understand biology or healthcare. But they’re concerned, and if things start going over their heads, they’ll tune out in that moment,” Dietz said.
• Do your best to keep parents and kids together.
• Develop front-facing skills. Displaying patience, being attentive, using positive language, and having an ability to “read” children and parents can go a long way toward improving their hospital stay.
Get the Most Out of Your CMMS


In this book, authors Ted Cohen, MS, FACCE, and Matthew Baretich, PE, PhD, provide guidance and best practices for:

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