white paper

TEAMHealth

Pediatric Emergency Medicine: Insights for Establishing a High-Performing Department or Service Line

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When it comes to medical care, children are not just "little adults."

The field of Pediatric Emergency Medicine (PEM) requires specialized knowledge, training and experience to effectively care for infants, children and adolescents—especially in an emergency, when every second counts.

In fact, a recently published 2019 study showed that critically ill children are more than three times as likely to die if they are taken to a hospital poorly equipped to provide emergency pediatric care than if they visit an emergency department (ED) that is well-prepared for resuscitation of pediatric patients.[i]

Studies like this underscore the industry's increased awareness around the value of pediatric emergency care, as well as the rising demand for pediatric emergency medicine physicians who have the ability to support a dedicated service line or hospital "department within a department."

This white paper explores how the field of PEM differs from adult emergency medicine and offers tips for hospital leaders to build, grow or strengthen their PEM service.

HISTORY OF PEM

Pediatric emergency medicine focuses on the care of acutely ill or injured children in an emergency department. The subspecialty began to emerge in the 1980s as

medical societies recognized and raised awareness of the need for specialized equipment, medication and training for treating children in emergency situations.[ii]

As early as 1980, hospitals such as Children's Hospital of Philadelphia began to establish PEM fellowship programs. Ten years later, the American Board of Emergency Medicine and the American Board of Pediatrics applied for approval to offer subspecialty certification in PEM, and the first board examination was offered in 1992.[iii] Since then, more than 2,500 physicians have earned their PEM board certification,[iv] and today there are more than 70 PEM fellowships open to both pediatricians and emergency medicine physicians.[v]

Despite the growth of the young specialty, demand for PEM physicians continues to outpace supply — particularly in non-academic or community hospital settings.

Today, the majority of PEM physicians (about 63%) practice in freestanding children's hospitals, and roughly 27% practice within a dedicated pediatric unit within a general ED.[vi] Although some children are treated in these settings, the vast majority—nearly 90 percent of the 30 million children aged 18 or younger who visit an ED each year—are treated in community hospitals, which often have no pediatric unit.[vii]

> **"Most physicians who completed a pediatric emergency medicine fellowship stayed in academics or stayed at a giant children's hospital. I don't think anyone anticipated the current appetite for the subset emergency department that covers kids."**
>
> Ryan Redman, MD, FAAP

PEM VS. EM

Because treating children with emergent medical conditions can be dramatically different from treating adults, hospitals must have specially trained staff, equipment and additional pediatric-specific resources.[viii,ix] Research shows that, to date, many hospitals are not fully prepared.

A national assessment of more than 4,000 U.S. hospitals' readiness for a pediatric emergency found the median readiness score was 69 on a scale of 100. The study, published in JAMA Pediatrics in 2015, was based on self-reporting of compliance with guidelines issued in 2009 by the American College of Emergency Physicians, the American Academy of Pediatrics and the Emergency Nurses Association.[x]

A report on the study by the Wall Street Journal noted "only about half of the participating ERs met two key criteria—a doctor and nurse with expertise to coordinate emergency care of children, including staff training, and a formal disaster plan that addresses the needs of children. And while a majority of ERs have most of the recommended emergency equipment, half don't have all of it. More than 15% are missing critical tools such as special forceps to remove objects obstructing a child's airway."

In addition to specialized equipment, emergency department clinicians treating children must be conversant in age-based vital signs, weight-based medication dosing, and which medications are and are not appropriate in the pediatric population. They must be aware of disease processes that are unique to children, such as intussusception—a condition that is the most common cause of intestinal obstruction in children younger than three. There are also different protocols around treating pain and anxiety in children, such as offering nitrous oxide in a situation where an adult might be expected to cope with discomfort.

Additionally, clinicians must be prepared for the unique challenges of interacting with children and their families. Infants and children may be too young to understand or follow instructions, and parents may be distraught by their child's condition or the need for their child to be safely immobilized while clinicians provide care. Administering an IV, obtaining blood, inserting a urinary catheter or stitching up a laceration in a pediatric patient, for example, all require more than one set of hands.

A 2006 Institute of Medicine report found "many providers of general, not subspecialty, emergency care feel stress and anxiety when caring for children that they do not feel when caring for adults. Often, these providers undertreat or fail to stabilize seriously ill children, and there is wide variation of treatment patterns. Simply put, general emergency care providers in community EDs, who are the consummate experts in the treatment and resuscitation of critically ill adults, are not as equipped to care for our kids as are specially trained pediatric emergency care providers."[xiii]

BUILDING A SUCCESSFUL PEM PROGRAM

With those differences and dynamics in mind, there are several steps hospital leaders can take to establish a PEM department—or enhance the care their general ED is delivering to children:

1. Recruit the right clinicians and nurses
2. Focus on patient and caregiver experience
3. Develop standardized care protocols
4. Provide PEM-specific nurse training, equipment and supplies
5. Establish transfer agreements with nearest children's hospitals with subspecialty services
6. Create a culture of collaboration and continuous learning

Recruit the Right Clinicians and Nurses

Like all things in healthcare, effectiveness requires having the right people in the right place at the right time. In this case, that means physicians, advanced practice clinicians and nurses with experience in pediatric emergency care.

The gold standard, of course, is securing board-certified PEM physicians and pediatric trained/certified nurses. But there are fewer than 300 PEM physicians certified every other year (286 in 2017, 196 in 2015),[xiv] and many of those clinicians choose to practice in dedicated children's hospitals and academic settings. This creates a challenging recruitment environment for community hospitals, and it is unlikely every hospital could fill its staff with fellowship-trained specialists.

However, in some cases it may suffice to recruit one board-certified PEM physician to lead a department staffed with clinicians who can be effective under his or her direction. For example, many EDs welcome experienced pediatricians and family practice physicians as part of their PEM teams.

It's important, too, that nursing staff have experience and the appropriate skills and training for caring for children. The Institute of Pediatric Nursing estimates more than 180,500 registered nurses provide care to a pediatric population in a hospital setting.[xv]

Keep in mind, though, that PEM, like general emergency medicine, is a subspecialty where burnout is relatively common.[xvi] In this case, not only are clinicians and nurses operating in what can be a high-stress environment, they may regularly face instances of child death. Hospital leaders should have mechanisms in place to monitor for and address clinician burnout, as well as training like mock codes and crisis debriefing to help clinicians feel better prepared for distressing situations when they arise.

Focus on Patient Experience

Anyone who has visited a children's hospital knows what a kid-centric medical environment can look and feel like. Geared toward children of all ages, children's hospitals may use bright colors, themes about nature or animals, kid-sized furniture, toys and video game consoles. Spaces are meant to be inviting, comforting and calming.[xvii,xviii]

While not all hospitals can carve out a dedicated space for pediatric emergency patients and overhaul its design, the sentiment behind these spaces holds true—and should carry over to the demeanor and approach that clinicians take when interacting with young patients and their families. Encouraging a positive patient experience is vitally important.

With little reference for the adult world of medicine, many children are frightened by the cold and sterile spaces of hospitals and the unfamiliar people huddling over and rushing around them. Clinicians should always work to put children at ease through tactics like speaking to them at eye level, explaining care and procedures in ways children can understand, and offering distractions. Some facilities employ specialized pediatric health professionals, called child life specialists, to help provide age-appropriate preparation and coping around medical procedures. Departments may also provide things like

age or developmentally appropriate toys, music and warm blankets to help children feel more at home and at ease.

The goal of these efforts is not only to make the child feel good and ensure clinicians can deliver the care they need in that moment, but also to create a positive impression of medical care that will serve as a foundation for the child's future experiences. If a child's first contact with a medical professional is traumatizing, it could impact them into adulthood.

In addition to the child, clinicians must be mindful to care for the entire family. Anxious caregivers are encouraged to be more hands-on with their child than in a typical adult ED—holding hands during a procedure, participating in comfort holds or staying in the room during resuscitative efforts. Departments may also offer dedicated family liaisons to ensure parents are comfortable and have the resources they need to remain focused on their child during their hospital visit.

Develop Standardized Care Protocols

As in adult emergency medicine, standardized care protocols can help improve compliance with evidence-based guidelines, reduce variation and improve outcomes for patients with certain symptoms or conditions. Developing these kinds of care roadmaps can be particularly helpful in PEM departments staffed by advanced practice clinicians, pediatricians, family medicine practitioners or others without PEM fellowship training.

These standardized care maps may address things such as how to score and treat a child who presents with an asthma attack, or the process to follow when evaluating a child for appendicitis, treating a child under two months of age who has a high fever, or evaluating the need for brain imaging after a head injury. These kinds of protocols can provide peace of mind for clinicians and administrators around quality and patient safety, and when communicated to families they can instill confidence that their child is receiving care that pediatric emergency medicine specialists have deemed the standard for that child's condition.

Provide PEM-Specific Nurse Training, Equipment and Supplies

Given the shortage of PEM-trained nurses, hospitals often offer pediatric training opportunities for their nursing team. For example, some hospitals support their nurses attending the Emergency Nurse Pediatric Course (ENPC), a certification program designed by pediatric emergency nurses and offered through the Emergency Nurses Association. The two-day course, taught by qualified emergency nurses, is designed to provide the core-level pediatric knowledge and psychomotor skills needed to care for pediatric patients in the emergency setting.

Regulatory agencies acknowledge the need for this kind of training, as well as the PEM-specific resources described earlier in this document. The Joint Commission, for example, requires hospitals to provide the appropriate resources (e.g. medication, equipment, policies, and education that addresses pediatrics) for accreditation and certification. Although maintaining proficiency in pediatric competencies continues to be a challenge for hospitals, many have adopted age-specific competency training and validation as a standard.

Establish Transfer Agreements

To promote the best possible outcomes for cases that require sub-specialty care, PEM departments should establish transfer agreements with the nearest children's hospital offering services they don't provide. These agreements allow for the rapid transfer of critically ill and injured children to a facility that is most prepared to address their needs.

For example, a community hospital may seek a transfer agreement with a nearby children's hospital with a pediatric intensive care unit, pediatric surgical capabilities such as neurosurgery, trauma/ burn centers, and other subspecialties like gastrointestinal and cardiology.

Create a Culture of Collaboration and Continuous Learning

Effective communication among clinicians can be just as important as physician-patient communication. Given that PEM is still a young specialty, with a relatively small physician community, hospitals may want to encourage their clinicians to attend conferences like the Advanced Pediatric Emergency Medicine Assembly and seek out professional groups (in person or virtual) that allow them to share experiences and learnings to continue furthering their practice. Clinicians should also work to communicate among providers in their department—other physicians, nurses, advanced practice clinicians, etc., to maintain morale and build a cohesive culture.

In addition, PEM clinicians practicing in settings connected to a general ED may find cross-collaboration with their adult ED colleagues to be beneficial in keeping their skills sharp. For example, PEM clinicians don't see as many sexually transmitted diseases or ectopic pregnancies as those in an adult ED. And with steady increases in youth suicide rates,[xix] PEM clinicians may find it helpful to collaborate with adult ED colleagues around suicide prevention measures, especially as children

transition from pediatric to adult care when they turn 18 years old.

ENLIST A PARTNER

Hospital leaders who are considering a new pediatric ED, or that want to take steps to improve pediatric care in their general ED, should consider enlisting an experienced outside partner.

A clinical outsourcing company like TeamHealth knows how to effectively recruit and retain the right clinicians, implement the necessary changes to workflow and culture, maintain a high-performing PEM service line or department and provide the best practices and resources to support and work with nursing and hospital partners. These kinds of partnerships can benefit the hospital by offloading the burden of recruitment and department management to an organization that lives and breathes emergency medicine. Hospital leaders can then focus on running the rest of the facility, knowing they have an expert team supporting the goals of the hospital, constantly striving to deliver the most efficient, highest-quality care.

CONCLUSION

Although general EDs care for people of all ages, research confirms that children who visit pediatric EDs tend to fare better. Caring for infants, children and adolescents requires specialized knowledge, training and equipment that are not always readily available in a community hospital ED. Increasingly, hospital leaders are looking to strengthen their pediatric emergency care—or build a PEM "department within a department"—to cater to the needs of children and families. To do so, it's critical to focus on recruiting the right clinicians and nurses, providing a positive patient experience, creating standardized care protocols, providing PEM-specific training and supplies, establishing transfer agreements and instilling a culture of collaboration and continuous learning. When that's a heavy lift for the hospital, there are partners who can help.

If you would like more information, please contact our Business Development team at ***business_development@teamhealth.com*** or visit ***teamhealth.com/contact***.

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