

ED clinical leaders eager to provide early treatment for pediatric sepsis

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In a qualitative, interview-based study of Emergency Department leaders, researchers at the University of Colorado Anschutz Medical Campus found most were motivated to provide high quality pediatric

sepsis care but disagreed on how best to do it.

"Pediatric sepsis is a time sensitive emergency, and a leading cause of pediatric morbidity and mortality," said the study's lead author Halden Scott, MD, Ph.D., associate professor of pediatrics at the University of Colorado School of Medicine. "Preventing sepsis deaths through early recognition and treatment is a global and national public health priority."

Scott is an expert on treating sepsis, a potentially deadly reaction to severe infection that can lead to multiple organ failure. Doctors usually treat it with [intravenous fluids](#) and antibiotics. The first hour of treatment is critical.

For children, the first hour of emergency care occurs in the Emergency Department (ED) closest to where they are, usually a general ED that cares for adults and children. Efforts to improve the quality of emergency care of sepsis have largely focused on children's EDs. In this study, Scott sought to understand the factors driving quality of sepsis care in general EDs.

The study, published today in the journal, *Annals of Emergency Medicine*, found that general ED leaders were interested in providing high-quality sepsis care, but also expressed a desire for more actionable pediatric sepsis guidelines.

They also emphasized the role of children's hospitals in providing consultation and education to staff at other health care facilities. But the doctors had mixed emotions about reportable metrics, especially in EDs that saw fewer pediatric patients.

Scott and her colleagues conducted 19, hour-long interviews with 21 participants representing 26 [hospital](#) or EDs in Colorado, Idaho, Missouri, Oregon and Washington. They surveyed those in [large cities](#)

and more rural locations, from level one to level four trauma centers.

Some saw sepsis on a regular basis while others rarely experienced it.

"In some cases, participants described a specific case of a child who died of sepsis as a galvanizing case for their hospital system," Scott said.

Staff at smaller hospitals in more rural locations knew their communities relied heavily upon them. A similar sense of purpose and preparedness was evident in more urban hospitals.

Yet location sometimes decreased motivation to prepare for pediatric emergencies, the study said. Hospitals near dedicated children's hospitals had lower numbers of [pediatric patients](#) because those most seriously ill were immediately taken to the children's hospital.

"To these hospitals, pediatric preparation was less of a priority," the study said.

At the same time, those surveyed were eager for more guidance on pediatric-specific sepsis tools and guidelines. Their views were mixed on some of the current guidelines. Some said they were not specific enough, others said the exact opposite.

Many used sepsis tools like algorithms, pocket cards and other educational aids provided by their local children's hospitals. And while they mostly worked well together, some respondents expressed frustration with the process of transferring a child with sepsis to a children's [hospital](#). They described delays and other impediments.

Opinions varied about legislative mandates in sepsis quality reporting. Some worried they might strain already overburdened quality improvement staff, others thought it could increase resources for

pediatric sepsis care in hospitals where children aren't the focus.

In May, Scott published another [study](#) in the *Annals of Emergency Medicine* where she and her colleagues examined whether giving children with sepsis 30 ml/kg of intravenous fluid in the first hour after admission to the ED was associated with sepsis-attributed mortality among those with hypotensive septic shock.

They discovered that receiving more than or equal to 30 ml/kg in the first hour was not associated with higher mortality rates compared to receiving less. The finding suggests targeting the timeliness of early fluid resuscitation matters more than targeting a specific volume as a quality of care measure. Both timeliness and volume metrics have been used to measure the quality of [sepsis](#) care in the past.

"My hope is that with these papers, we can continue to evolve guidelines to emphasize the quality metrics that truly impact outcomes the most," Scott said. "And better support general EDs in giving first hour care to kids wherever they are."

More information: Halden F. Scott et al, "These Are Our Kids": Qualitative Interviews With Clinical Leaders in General Emergency Departments on Motivations, Processes, and Guidelines in Pediatric Sepsis Care, *Annals of Emergency Medicine* (2022). [DOI: 10.1016/j.annemergmed.2022.05.030](https://doi.org/10.1016/j.annemergmed.2022.05.030)

Matthew A. Eisenberg et al, Association Between the First-Hour Intravenous Fluid Volume and Mortality in Pediatric Septic Shock, *Annals of Emergency Medicine* (2022). [DOI: 10.1016/j.annemergmed.2022.04.008](https://doi.org/10.1016/j.annemergmed.2022.04.008)

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