

Implementing sepsis screening protocols for all patients regardless of age

EMERSON HOSPITAL

Emerson Hospital is a community hospital in Concord that sees approximately 32,000 patient visits in their emergency department (ED) each year, including about 7,000 pediatric patients.

Challenge

In 2017, after their ED team had been working on reducing risks of adult sepsis for several years, they decided to develop a sepsis screening tool that would be appropriate for their pediatric patients. In this way, the hospital could meet its goal of screening every patient who visited the ED for sepsis, regardless of age. By taking the step to develop and adopt a pediatric screening tool, Emerson Hospital became one of only a handful of community hospitals in the state to have a process to systematically screen pediatric patients for sepsis.

Action

The ED team began the project by engaging with the head of the pediatric hospitalist service, Dr. Inger-Marie Pu, who served as the subject matter expert for the project. Unlike adult sepsis, which has a well-developed evidence base and national guidelines for reference, the team found that resources for pediatric sepsis were comparatively scarce.

After reviewing the available literature, the team opted for an age-based vital sign screening tool that aligns with the Pediatric Advanced Life Support (PALS) guidelines for abnormal vital signs, along with a suspected infection and/or other high-risk medical condition. This helps the ED team identify patients who may be very sick, which then triggers additional screening for sepsis if the patient has a suspected infection. If a pediatric patient has signs of sepsis, the nurse has the option to begin treatment, which would include starting an IV, drawing labs and even getting the fluid bolus started. The ED nurse will inform the emergency physician of the positive sepsis screen so the



A pediatric hospitalist at Emerson Hospital examines a young patient.

physician can evaluate the patient as soon as possible. The emergency physicians will have a conversation with the patient's family about the screening/diagnostic process and any appropriate treatment. The emergency physician may elect to consult the pediatric hospitalist, who is always in house.

Outcomes and Lessons Learned

In 2018, the first year that Emerson's ED used the screening tool, the hospital saw five pediatric patients with sepsis. None of the pediatric sepsis patients were sick enough to meet criteria for septic shock. This comparatively low volume of pediatric patients makes it a bit challenging to do process improvement, but the team feels as though the screening tool has been effective in identifying patients without slowing down the triage process.

As it is currently configured, the screening is part of the triage nurse's initial assessment of patients and can be completed fairly quickly. It is made easier by the fact that it is programmed into the ED's electronic health records system, making it available for reference to the triage nurse. In this way, "with every patient who comes into the ED, it goes through the nurse's mind to think about sepsis," said Brenda McCurdy, RN, who is the Stroke and Sepsis Coordinator at Emerson Hospital.

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As with any quality improvement project, the Emerson team highlighted the importance of being flexible and making sure there was strong staff buy-in prior to implementing the new process. It is also important to make sure there is a good feedback loop so care challenges can be worked out and so that staff know what is working well and what isn't. Including the IT staff as part of the sepsis team was key to enabling customization of the EHR for this project.

At Emerson, the pediatric resource nurse in the ED helps review and audit charts regularly so that clinical team members receive feedback on specific pediatric cases. The team emphasizes the importance of having tools available to the staff so they have something to refer to when the ED gets busy. "So, when you have a crazy day in the ED, which is every day, you have the sepsis checklist and protocol to refer to and it makes it so much easier for the clinicians," said Ms. McCurdy.