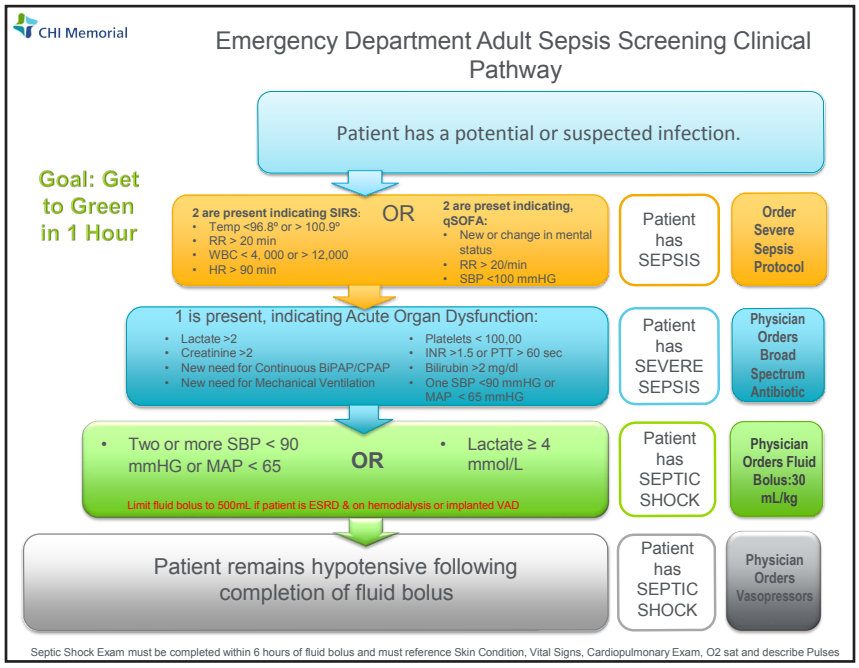
CHI Memorial Shines a Spotlight on Sepsis

Rethinking, Retooling Processes When Every Second Counts

In hospitals across the country … and in medical dramas everywhere … 'Code STEMI' sends clinical teams into high gear with everyone knowing their roles to ensure delivery of the highest quality care in a situation where every minute matters. Rarely does sepsis get the same star treatment. Yet, like heart attack and stroke, every second counts with sepsis or the outcome can be just as deadly.

In fact, sepsis is the leading cause of death in non-coronary care ICUs across the country. "In hospitals, sepsis is the number one cause of mortality nationwide, and it's the number one cause of readmission," noted Catherine "Beth" Tipton, BSN, RN, CWON, a quality management professional with CHI Memorial.

Several years ago, a CHI Memorial work team – which included representatives of CHI Memorial Glenwood in downtown Chattanooga, CHI Memorial Hixon, and CHI Memorial Georgia just over the state line – tackled the system's sepsis protocols. "It was initiated as a quality push" said Tipton. After a flurry of activity in creating order sets around sepsis and rolling out a new screening tool, the initiative seemed to lose some steam over time. "It was a bit like get this done and then mark it off," she said.



In the summer of 2017, however, sepsis returned to the spotlight. "In August 2017, the Emergency Room physician group asked for a 'Code Sepsis.' They wanted it to be very much like the other codes we have where everyone knows their role," explained Tipton. While the health system ultimately adopted a bit different model for sepsis, the physician request started an important conversation.

"When compared to stroke or STEMI, volumes were much higher with sepsis," said Tipton. "With the code approach, it's called out over the loudspeaker, and anyone available stops what they're doing and helps at the bedside. The approach we took with sepsis is that we needed to provide better screening tools and really empower the nurses to start treatment as part of the care team."

She added a significant number of patients come to the Emergency Room from the community presenting with sepsis, which can rapidly escalate to severe sepsis and septic shock if the systemic inflammation isn't identified and treatment initiated. "The nurses had asked for more empowerment, and the physicians wanted that, as well," Tipton said.

In early 2018, a pilot project rolled out in the hospitals' ERs with a new screening model where vital signs taken at triage were reviewed for specific red flags, including abnormal ranges for respiratory rate, white blood cell count, temperature, heart rate, or systolic blood pressure, along with changes in mental status. Any two findings indicated the possibility of sepsis and prompted the next step. Once labs came back, nurses looked for any organ dysfunction. If present, "The nurses would be prompted to order the severe sepsis protocol prior to notification of the physician."

After piloting in the ER, the protocol was expanded to inpatient units, as well. Between February and August 2018, the three hospitals raised sepsis protocol compliance rates by 50 percent for both admitted patients and those presenting at the ER. Tipton said that improved compliance rate is critical. "It's all to prevent mortality associated with sepsis. Mortality goes up 8 percent for every hour that care is delayed," she explained. "The goal is to make the core team mindful that every minute matters."

Tipton continued, "Our first rollout of the screening tool was geared toward more nursing empowerment. As we rolled out, all of the bundle parts based on nursing improved, but we came to recognize that those bundle parts that were physician-based still required important input from our physicians to make appropriate inpatient decisions."

Adopting a mentality that sepsis screening and care is an ongoing process of improvement rather than a fixed initiative, Tipton said the new screening tool was changed again in September 2018. "As we rolled out the screening tool, we continued to watch our numbers to see where we were failing," she explained. "We saw there were a lot of issues in identifying the septic patient, especially with septic shock, when blood pressure was normal."

She continued, "As we drilled down on the cause of the difficulty with identifying these patients, the physicians thought it had to do with the screening tool being in a table format, so they requested a flow chart." In the new, more visual format (see image), it's easy to quickly assess whether the patient falls down the chart into the blue box. If so, the nurse notifies the physician and asks for a broad-spectrum antibiotic.

Tipton added that if the findings in the blue box are positive, then the patient moves down to green, and the next level of the protocol is put in place. "It's still based off those initial labs ordered in the severe sepsis protocol; and if lactate comes back at ≥ 4, and they have a blood pressure less than 90 systolic, then they need to ask for a physician and order a fluid bolus." She added "It there is a positive blue box or green box, they're going to be admitted. It just depends where – a telemetry bed or ICU."

The changes have made a difference with compliance continuing to trend upwards, but Tipton said the hospitals would continue to tweak formatting, education, awareness and tracking as needed.

"In 2015, when we first rolled out a sepsis initiative, it was with the idea that it would have an end date once all the boxes were checked," said Tipton. "Now we have a different mindset that this is going to be a continuous change process."

After all, she continued, "Quality is never done."

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