

Quality Improvement of Early Recognition and Response to Sepsis

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With so many advances in technology and modern medicine, there is a constant need to reevaluate what the term “best practice” means in healthcare, because what was best practice last year may be harmful to the patient this year. One reliable way for the healthcare system to remain current and compliant with the ever-changing concept of “best practice” is to participate in, or simply read, quality improvement studies. Quality improvement studies strive to continuously assess and improve care processes to make these processes as efficient as possible without sacrificing patient safety and satisfaction (Backhouse et al., 2020). In other words, quality improvement studies can be used to improve the way we do things such as placing catheters, dressing changes, educating our patients upon discharge and the way that we chart by reviewing statistics and other data to identify problem areas in the current process and fine tuning them to be less destructive to the patient. Another way that the healthcare system can remain current on best practices is by implementing Quality and Safety Education for Nurses (QSEN), which was developed to help nurses develop the safety and quality of care they are providing (QSEN, 2022). QSEN focuses on the core competencies of patient centered care, teamwork and collaboration, evidence-based practice, quality improvement, safety, and informatics, and allows nurses to become active contributors in the evolution of healthcare (QSEN, 2022). QSEN also encourages a non-disciplinary approach to reporting errors, which helps the nursing profession grow through errors made and prevent the stagnation of fear (QSEN, 2022).

One topic that is important to me as a surgical technologist is the prevention of sepsis. I have seen first-hand the damage that sepsis can reap on a patient and their family, and I cannot

stress the importance of taking the proper measures to prevent sepsis enough. Early recognition and response in sepsis is unsympathetically important because sepsis is a life-threatening condition that can quickly progress to organ failure and death if not treated promptly. Nurses are often a patient's first line of defense when it comes to recognizing the signs of sepsis, and by staying up to date on how to see the signs of sepsis as early as possible nurses can prevent septic shock and organ failure. By preventing the spread of sepsis efficiently nurses can also promote shorter hospital stays for their patients and prevent hospital re-admissions.

Article Summary

Sepsis is a quickly developing, life-threatening condition activated by the body's extreme response to infection. This article examined how early recognition of the signs of sepsis and prompt intervention play a critical role in reducing mortality and improving patient outcomes (King et al., 2023). Early intervention can be the difference between life and death for a sick patient, because every hour the patient is left untreated brings a drastic increase in the patient's risk of death. The most critical signs of sepsis to be aware of in a patient are fever vs. hypothermia, tachycardia, tachypnea, hypotension, and confusion (King et al., 2023). The most effective early interventions of sepsis include using a screening tool such as the Quick Sequential Organ Failure Assessment, identifying the source, closely monitoring patient's vital signs for the critical signs listed above, obtaining blood cultures, administration of antibiotics within one hours of onset, administration of IV fluids, and oxygen and airway support (King et al., 2023).

Application to Nursing

According to King's study, the Quick Sequential Organ Failure Assessment (qSOFA) is a reliable method for detecting and diagnosing sepsis efficiently (King et al., 2023). This screening tool relies on a set of three variables that help predict mortality in patients who are known or suspected of having sepsis. The three variables included in this screening are: a Glasgow Coma Score of <15, a respiratory rate of >22 breaths/minute, and a systolic blood pressure of <100 mmHg (King et al., 2023). A patient only needs to have two of these three variables present to become considered qSOFA positive, and studies have confirmed that the qSOFA is a more reliable screening tool than the Systematic Inflammatory Response Syndrome (SIRS) screening tool, the National Early Warning (NEWS) screening tool, and the Modified Early Warning (MEWS) screening tool (King et al., 2023). King's study also found that sepsis care should be standardized throughout the hospital, and that doing so prevents delays in the detection and treatment of sepsis, repeating tests being performed on the same patient, and made navigating the patients EHR easier and more effective, which provides patients with a much higher chance of surviving sepsis by increasing the efficiency and communication of their providing healthcare team (King et al., 2023).

Practice

The "SEP-1 Bundle" is a highly effective standardized treatment bundle that was developed for the treatment of severe sepsis and septic shock that was introduced by the Center for Medicare and Medicaid Services (CMS), to standardize the protocols for the healthcare team in response to sepsis (King et al., 2023). To comply with the Sep-1 Bundle a patient must have their lactate levels tested, blood drawn for cultures, begin the appropriate antimicrobial therapy, and be given fluids within three hours of the diagnosis of sepsis (King et al., 2023). The SEP-1 Bundle also mandates that lactate tests be repeated if the result of the original test was higher

than >2, volume status and tissue perfusion be assessed after fluids are given, and that pressors are titrated to reach a goal MAP of >65mmHg within six hours of the diagnosis of sepsis (King et al., 2023). Following standardized protocols such as the SEP-1 Bundle give the healthcare team an easy-to-understand policy to look up and implement when a sepsis case is diagnosed on their unit, which will ultimately cut down on confusion and wasted time in the time sensitive battle against sepsis.

Education

According to King, healthcare's frontline defense against sepsis is education and organization, and this theory carries over to educating the loved ones providing care to patients at risk for sepsis at home. These at home caregivers do not have the training a healthcare professional is lucky enough to possess, and it is crucial to educate these caregivers on what the signs of developing sepsis look like, and how to respond efficiently. The key signs to educate at home caregivers to look out for are hypotension (look for signs of dizziness or weakness), confusion (a patient may seem drowsy or be difficult to wake), shortness of breath (breathing will look fast, shallow, and/or labored), a very high or very low body temperature, a rapid heart rate, little to no urine output or very dark urine despite a regular intake of fluids, and a greyish-blue tint to the lips, fingers, and toes (Cleveland Clinic Staff, 2025). If a caregiver notices that any combination of these symptoms is present in their loved one, or if the loved one is simply acting "off", the caregiver should call 911 immediately. To avoid panic and confusion in this situation, patients who are at risk of developing sepsis should have a hospital bag packed with daily essentials, their provider's contact information, and a written list of medications the patient is taking along with any allergies the patient may have (Cleveland Clinic Staff, 2025).

Research

King utilized information from a study that acquired information on the results of a state-wide mandate for the use of bundled sepsis care, and an even larger study that involved 1, 012, 410 patients in 506 different hospitals across five different states (King et al., 2023). Both studies showed improved patient outcomes when the plan of care for a sepsis diagnosis was standardized throughout the hospital and bundled sepsis care was implemented (King et al., 2023). Having read this information, I am inclined to agree with King that bundled sepsis care should be the standard in hospitals and that it is the best way for us to improve the quality of care provided to patients who are at risk for or have developed sepsis,

Conclusion

Sepsis is a global health challenge that produces high rates of mortality and morbidity, and when working with septic patients there is little room for error. Early recognition and staff organization are two of the healthcare system's biggest allies when it comes to conquering this challenge. By promoting early education and fighting for standardized bundled sepsis protocols across all hospitals healthcare workers can improve the quality of healthcare provided to septic patients and save lives.

References

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