Quality Improvement: A Review of a Nurse-Led Sepsis Protocol Implementation in the Emergency Department

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According to Houser (2023), quality improvement is defined as "the systematic, data-based monitoring and evaluation of organizational processes with the end goal of continuous improvement (p. 11)." In terms of healthcare, the purpose of quality improvement is to improve organizational workflows, systems, and processes, with the end benefactor being the patient (Houser, 2023). To expand on quality improvement, Quality and Safety Education for Nurses [QSEN Institute] (2020) created six "QSEN Competencies," which include patient-centered care, teamwork and collaboration, evidence-based practice, quality improvement, safety, and informatics. The QSEN Institute's (2020) competency of quality improvement expands the purpose of quality improvement to add that nurses should have the knowledge, skills, and attitudes to improve the systems they work in to benefit the patient. Overall, quality improvement is integral to continuously improving healthcare systems and delivery.

The National Institute of General Medical Sciences [NIGMS] (2021) describes sepsis as a systemic, body-wide immune response to an infection or injury, among other causes. Sepsis is commonly caused by bacterial infections but can also be viral in nature (NIGMS, 2021). The impact of sepsis on the body is significant – the condition can develop rapidly and lead to shock, multiple organ failure, and can quickly result in death (NIGMS, 2021). The overall impact of sepsis in the United States is undeniable – according to the Centers for Disease Control and Prevention [CDC] (2022), approximately 1.7 million adults will develop sepsis annually, and approx. three-hundred and fifty thousand cases are fatal or discharged to hospice care. According to Yealy et al. (2021), emergency departments are no strangers to sepsis, with over eight-hundred

and fifty thousand individuals presenting to emergency departments for sepsis-related symptoms annually. Nurses in the emergency department are first-line identifiers of sepsis and play a crucial role in initiating sepsis treatment. Early identification and treatment of sepsis are vital to improving sepsis-related outcomes and have the potential to save over ninety thousand lives annually (Moore et al., 2019). This review aims to illustrate the importance of nurses in sepsis-related treatment in the emergency department.

Article Summary

This article examines the implementation of evidence-based, time-sensitive sepsis treatment protocols by nurses in the emergency department. According to Moore et al. (2019), the protocols consisted of a detect, act, reassess, and titrate (DART) nursing protocol based on sepsis care guidelines from the Centers for Medicaid and Medicare Services (CMS) Inpatient Quality Reporting (IQR) program. The DART protocol implementation significantly improved lactate levels, blood cultures, and antibiotic administration time compared to baseline figures (Moore et al., 2019). Additionally, emergency department length of stay and hospital length of stay both decreased when compared to baseline figures (Moore et al., 2019). The DART nursing protocol significantly improved sepsis-related care in the emergency department.

Introduction

The article by Moore et al. (2019) was published in the peer-reviewed Journal of Emergency Nursing. The research examines the nurse-led implementation of the DART sepsis protocol in a level-2 trauma center emergency department (Moore et al., 2019). The DART protocol implementation significantly improved sepsis-related care metrics, length of stay, and

IQR program compliance (Moore et al., 2019). The research article is linked to sepsis identification and treatment initiation as it examines nurse-led protocols concerned with both issues. The article provides rationales to show that emergency department nurses are an integral part of the care team and play a crucial role in sepsis treatment.

Overview

The article directly shows the importance of nurses in early sepsis identification and treatment. The research indicates that the nurse-implemented DART protocols positively impacted patient outcomes and hospital-related metrics (Moore et al., 2019). The research completed by Moore et al. (2019) on sepsis protocols in the emergency department relates well to QSEN Institute's competency of quality improvement. QSEN Institute (2020) described quality improvement as using "data to monitor the outcomes of care processes and use improvement methods to design and test changes to continuously improve the quality and safety of health care systems (table 4)." The research conducted by Moore et al. (2019) met all of QSEN Institute's criteria – the study used data to monitor the outcomes of the DART sepsis protocol implementation and compared this data to baseline figures, allowing for insights to alter the process as needed. The article is an excellent example of connecting QSEN Institute's competency of quality improvement with real-world application.

Quality Improvement

While the sepsis protocols implemented by Moore et al. (2019) were only implemented in one facility's emergency department, the positive findings indicate that the DART protocols could benefit other organizations. Because the DART protocols are focused on early sepsis identification and treatment, other settings the protocols could be implemented in include other

acute care settings, urgent care clinics, and other emergency departments. Before initiating the project, Moore et al. (2019) outlined the resources needed for a successful intervention. According to Moore et al. (2019), before implementing the DART protocols, a protocol checklist was developed, and all ED staff at the facility were educated on sepsis and the DART communication checklist (p. 692). During implementation, the research team collected continuous feedback from care team members regarding positive and negative experiences (Moore et al., 2019). After implementation, the research team disseminated surveys to the care team to examine their thoughts on the project (Moore et al., 2019). If the DART protocols were to be implemented in other settings, various resources would be needed. Resources, including a protocol checklist, team member education, and feedback system, would benefit a facility looking to collect resources for all stages of project implementation. With these resources, the new facility can follow the processes described by Moore et al. (2019).

Implementation of the DART protocols could benefit an institution in multiple ways. According to Moore et al. (2019), statistical cost analysis resulted in statistically insignificant savings compared to baseline. Although the cost savings were statistically insignificant, the savings were still identified and could benefit hospitals over a more extended period. While Moore et al. (2019) did not collect information on patient satisfaction, the DART protocols were associated with improving various metrics, including length of stay and treatment initiation, which may positively benefit patient satisfaction. Moore et al. (2019) collected data regarding care team satisfaction and noted that 80% of nurses responded that the DART protocols were easier to use than the previous facility protocols and allowed them to initiate treatment faster. On a related note, it is worth noting that the staff survey had a low response rate, with only 9% of the care team completing the survey (Moore et al., 2019). Lastly, the potential impact on patient

safety and nurse safety is unknown. While the sepsis protocol implementation did show positive care-related changes, this does not directly relate to current patient or nurse safety. The question of how the protocol could impact safety in the emergency department needs to be examined further in another protocol implementation project. Overall, the DART sepsis protocols could provide substantial benefits when implemented in another institution.

Application to Nursing

Here add in a summary of the information learned to the application to practice. Follow the MEAL paragraph formatting and use Grammarly.com. Be sure to cover all aspects within the rubric. Be sure to use double space and to tab over for your first line of a new paragraph.

Practice

Paragraph goes here discussing the application to practice. Review the rubric for full requirements. Follow the MEAL paragraph formatting and use Grammarly.com.

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Conclusion

Write a conclusion here in your overall paper. Review the rubric for full requirements.

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*As you can see the reference is centered and is bolded. The first line is NOT tabbed over, all

    other lines are, this is called hanging indentation. All references are double spaced. All

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