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Improving Safety & Quality Outcomes in a Rural Emergency Department with Clinical

Practice Guidelines for Nurses

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NURS 440: Managing for Safety & Quality Outcomes

Dr. Kim Little

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Improving Safety & Quality Outcomes in a Rural Emergency Department with Clinical Practice Guidelines for Nurses

In Farmville, Virginia, there is only one hospital for the entire town and the nearby nine counties. The Centra Southside Community hospital is a small, rural facility that aims to improve the quality of life within the communities it serves through excellent healthcare. The healthcare staff are very positive and work as an efficient team to advance health and healing. Nonetheless, healthcare staff always have room to grow in order to maintain their lifelong commitment to learning. Not only is this hospital widely utilized by patients, but it is also a significant clinical placement facility for nursing students from local programs. In the emergency department specifically, there is often at least one nursing student on the unit each day. The benefit of having nursing students in a hospital unit is that the students have fresh eyes and attitudes that are constantly searching for ways to improve themselves, as well as the unit to ensure that practices are up to date with nursing standard recommendations. During nursing school, students are taught about change theories and the importance of applying them to real nursing units and situations. Change theories promote leadership in nursing, encourage evidence-based practice (EBP), and enhance quality and safety outcomes for patients and staff.

The purpose of this research paper is to explain the methods and results of a nursing change theory being applied to a nursing issue at the Southside Community Emergency Department (SCED). The goal of applying this change theory is to attempt to provide an evidence-based solution that encourages critical thinking and problem-solving skills in nursing. At the SCED, there are little to no clinical practice guidelines (CPGs) in place for nurses to utilize. CPGs increase safety and quality health outcomes for patients, decrease healthcare costs, and ensure that EBP is being used. To address this issue, Kurt Lewin's change theory will be employed for the production and implementation of new CPGs for the SCED to use. This paper will discuss the methods used in the creation of the CPGs as well as explain the resulting CPGs. This research will not expand on the benefits or consequences of these CPGs in practice due to time constraints. Nonetheless, the expected outcome for this research is that the CPGs will increase emergency department (ED) nurses' confidence in patient care during times of high stress or uncertainty. Additionally, it is hypothesized that these CPGs will increase safety and quality outcomes for patients at the SCED.

The Nursing Issue

Identification of the Nursing Issue

The SCED in Farmville has 15 private rooms and four semi-private fast-track rooms. This ED is minimally certified in specialized services due to its nature as a community hospital and the patient population does not warrant for more specialties. A few of the most notable specialties that are not offered at SCED are trauma, comprehensive stroke center, or an emergency cardiac catheterization lab. While there is a catheterization lab and surgery center on site, they cannot accommodate emergency services, except in the instance of emergency obstetrics or orthopedic surgery. Additionally, the hospital does have in-patient admission services for oncology, obstetrics, medical-surgical, and intensive-care units. However, these units cannot accommodate acute and critically ill patients that require intensive or potentially surgical care for cardiac, neurological, gastrointestinal, and pediatric services. Approximately 25-30% of all admissions are transferred to another, larger facility that can more appropriately care for specialty patients and problems. The nearest hospital with these abilities is in Lynchburg, VA, which is an hour away by ground transportation.

It is important to keep these limitations in mind because they impact patient care accessibility, efficiency, costs, and safety. Additionally, due to the lack in specialty services, the nursing and physician staff may not often see extreme or critical cases of certain problems because the patient is brought to another facility, bypassing SCED. Thus, without the opportunity to practice care for these patients and without all the appropriate resources, nursing and physician staff may feel more overwhelmed, stressed, and unsure about their ability to care for these patients when they do arrive. More specifically, new graduate nurses, new hire nurses, or nurses transferred from another unit are most susceptible to being overwhelmed and unconfident in times that require critical thinking, judgment, and interventions. An emergency department is a specialized unit that requires many months of training to become proficient in the nursing care. Throughout many different hospitals in the state and country, there is an increase in the need for standardized nursing management of specific patients. The most notable clinical areas that have begun to address this nursing issue are in emergency medicine, pediatrics, geriatrics, and wound care. Certain larger hospitals in Virginia have been actively addressing this nursing issue for many years by creating individualized evidence-based CPGs. One example is the Virginia Commonwealth University Children's Hospital of Richmond, who has their CPGs published online for anyone to access for free.

Despite current literature supporting the use of evidence-based CPGs for nursing and physician use, the SCED has little to no CPGs that are approved for clinical use by the healthcare organization. The few clinical guidelines that the SCED does have are difficult to find, oftentimes not specific to the ED, and are difficult to interpret. Instead, the nurses and physicians in the SCED have standing order protocols (SOPs) that are updated annually to meet current EBP. The full-text version of these SOPs are also very difficult to find, if possible at all. Instead, the implementation portion of the SOPs are programmed in the electronic health record (EHR) to automatically generate based on certain documentation entries. Once a SOP is triggered in the EHR, the orders are adapted by the physician and the nurse is able to view the tasks in a checklist format. While this method is time-efficient, it does not encourage nurses to use clinical judgment skills. Instead, it allows nurses to become complacent in their practices and not further their lifelong commitment to learning. All nurses make a commitment to being lifelong learners, which means that they must stay up to date on new practices and advocate for changes in current practices in order to protect their patient's best interests. Complacency in nursing is established when the nurse is no longer using critical thinking skills prior to following orders, but instead blindly does them. This increases the likelihood of repeated or unnecessary tests and impacts patient safety related to accurate medical diagnosis. By using CPGs, complacency will decrease, critical thinking skills will improve, and good patient safety outcomes will increase. It is of the utmost importance that new graduate nurses are not led into complacency because they are oftentimes the best engines for change within a unit.

Plan of Study for the Nursing Issue

Upon recognition of this nursing issue, which creates a gap in excellent patient care, research will be conducted about the issue prior to contacting staff members. This is done with the intent of becoming educated in the old, current, and new EBP. Research should be conducted on 1) history of EBP in nursing, 2) uses of CPGs in nursing, 3) benefits of CPGs, and 4) concerns with CPGs. The types of journals for review should include meta-analysis, systematic reviews, and research studies. All journal articles should be peer-reviewed, evidence-based, and within the last five years. Once a literature review has been completed, it is appropriate to contact nursing staff about the issue.

To address this nursing issue at the SCED, multiple levels of nursing staff need to be contacted to 1) review nursing access to current SOPs, 2) review the references used to create current SOPs, 3) assess nurses use of and attitudes towards the current SOPs, 4) assess nurses' attitudes towards developing new CPGs, and 5) begin the process of creating and implementing new CPGs. The appropriate people to contact in the nursing hierarchy are daily staff nurses, charge nurses, and the nurse clinician. The daily staff nurses would be contacted about their approximate use of the current SOPs, their personal attitudes concerning current SOPs, and their perspectives on incorporating new CPGs. The charge nurses would be contacted about how easy or difficult it is to access current SOPs and CPGs, and for their perspectives on incorporating new CPGs. Finally, the nurse clinician would be the most significant nursing staff member to contact because they can provide the official and full-text versions of the SOPs and CPGs, as well as assist in the implementation of new CPGs for the SCED.

Literature Review

As defined by Grove & Gray (2019), EBP is "the integration of the best research evidence with our clinical expertise and our patient's circumstances and values to produce quality health outcomes," (p. 3). The purpose of using EBP in nursing is to promote best research evidence combined with clinical expertise to deliver "quality, safe, and cost-effective outcomes for patients," (Grove & Gray, 2019, p. 3). Additionally, the use of EBP in nursing should be translated into standards, protocols, and guidelines to best direct nurses in the implementation of EBP. The most beneficial method of implementing EBP that emphasizes safety and quality improvement is through CPGs. As defined by Melnyk & Fineout-Overholt (2023), CPGs are recommendations for assessment and treatment practices based on evidence-based research with the intent to reduce harm and optimize patient safety and outcomes, (chapter 8, para. 3). CPGs are meant to be flexible for patient accommodations and they should encourage interprofessional communication between all involved parties.

Across the literature, CPGs are largely supported for numerous reasons with the most cited themes being improving safety and quality outcomes for patients, increasing the effectiveness of medical diagnosis, and decreasing cost-implications. However, it is estimated that 30-40% of patients do not receive this level of care, (Correa et al., 2020, p. 2). This is due to a combination of barriers including the health system organization, the guideline itself, the healthcare professional, and the patient. The most common reason that CPGs are not used, even when they are available, is because there is a lack of nursing leadership that prioritizes CPGs and manages the implementation of them. In a meta-analysis and survey research article by Correa et al. (2020), it was found that many nurses "did not know whether to use the clinical practice guidelines or not when the doctors did not agree with each other or with the lead nurses," (p. 3). The support and guidance of a senior nurse or managing nurse is highly associated with new graduate or new hire nurse success when they are learning the SOPs and CPGs of a unit. Additionally, research by Grove & Gray (2019, p. 389) proved that when nursing leadership show support for CPGs, the unit or hospital is more likely to receive special accreditations and certifications.

In a study published by the Journal of American Medical Association, CPGs are proven to improve the efficiency and accuracy of medical diagnosis, which results in a decrease in unnecessary diagnostic tests, errors, and potential harm to the patient (Agha et al., 2022, p. 2198). Additionally, Melnyk & Fineout-Overholt (2023) stated that using CPGs can decrease healthcare costs and a superior CPG will include a cost-benefit analysis with associated risks and benefits that would impact the patient and their values, (Chapter 8, para. 4). The American Heart Association (AHA) is an example of an EBP research agency that frequently publishes updated practice recommendations. In all five AHA CPGs that were reviewed for the identified nursing issue, each CPG included cost-implications associated with recommended interventions. The following excerpts are examples of how cost-benefit analysis are included:

"Cost savings of approximately US \$30 million would be realized if the proportion of all ischemic stroke patients receiving IV alteplase was increased to 8%." (American Heart Association, 2019, p. 354)

"Higher cost and increased bleeding risk in elderly patients with renal impairment are disadvantages of LMWH that should be kept in mind." (American Heart Association, 2019, p. 384)

The AHA is a well-established organization that is dedicated to heart and brain health, with the biggest focuses being on cardiac arrests and strokes. Their recommendations and CPGs are followed by the majority of American hospitals because their evidence-based research and standards of care are some of the most trusted in our nation for nearly 100 years.

In addition to the majority of healthcare organizations accepting the need for CPGs, regardless of whether they use them or not, individual clinicians also support the need for CPGs to improve quality, safety, and cost outcomes. In a survey study performed by Amer et al. (2018), 248 nurses and physicians in a pediatric unit were asked about their perceptions of the effectiveness of CPGs in practice. Some of the most significant findings in the study showed that 94.6% of participants believe CPGs improve cost-effectiveness; 98.7% of participants noticed improvement in patient safety; and 98.7% of participants would recommend CPGs because of their standardized management of patient care, (Amer et al., 2018, p. 545-546). A similar survey study by Cook et al. (2018, p. 1-6) questioned physicians, physician assistants, and nurse

practitioners from a multitude of practices about their attitudes towards CPGs and their relation to decreasing healthcare costs. Of the 250 respondents, almost all of them stated that they rely on CPGs and felt comfortable adapting the recommendations for patient accommodations. Additionally, this study showed that 96% of respondents believe in educating their patients about the CPGs being used to promote adherence to treatments. When patients receive detailed education about their medical problem, diagnostic tests, and treatment, they are more likely to be participatory in their care. This means that a patient is more likely to adhere to prescribed medications and treatments at home, which will reduce the number of visits to a healthcare provider and decrease healthcare costs associated with visits and acute care management.

As aforementioned, one barrier to using CPGs is the lack of strong leadership to promote healthcare professionals to use them, (Correa et al., 2020, p. 3-7). Another concern with CPGs is that some providers claim that CPGs contain too much information and are, thus, difficult to read. Inversely, other providers claim that CPGs lack clarity and accurate specifications, thus appearing unreliable. Concerning barriers listed by Cook et al. (2018, p. 8-9) include providers believing that their years of experience makes them more knowledgeable than a CPG, as well as providers lacking the belief that incorporating EBP changes will improve patient outcomes and decrease treatment variation. Once providers were made aware of their experience bias and negative attitudes towards CPGs and changes in EBP, the majority stated that it encouraged them to be more trusting of CPGs and new EBPs. One recommended solution by Correa et al. (2020, p 7) that would help remedy this problem is by having automated electronic alerts to use a CPG or regularly audit medical records to show providers how often CPGs are utilized.

Overall, the trends in the reviewed literature are:

- CPGs are evidence-based and promote the best standard of care for patients' safety and quality outcomes
- 2. CPGs decrease healthcare costs for patients and healthcare professionals
- Strong leadership is necessary to encourage nurses and providers to use CPGs and accept changes in EBP
- 4. Nurses and providers must first recognize their negative perceptions of CPGs in order to correct their treatment methods

A noteworthy gap in the literature that could not be found even through extensive searches is how CPGs help nurses' understanding of clinical problems and treatments. Specifically, it would have been useful to know how impactful CPGs are for new graduate nurses and new hire nurses. This information would be helpful in the development and implementation process of the solution to this nursing issue because it could have been used as supporting evidence for why CPGs should be used, especially in an ED. A statistical research study should be conducted to determine the degree of usefulness that CPGs have among different levels of nurses.

Methods

In an effort to utilize the information obtained in this literature review, Kurt Lewin's nursing Force Field Theory of Change will be used to plan, develop, and implement a solution for the nursing issue identified at the SCED. According to Buckway & Sowerby (2023), Lewin's Theory of Change is one of the most popularly used theories to plan and implement change (p. 424). Moreso, Lewin's theory can be used outside of nursing, too, and is applicable for nearly any change project topic. The foundation of Lewin's theory is that "an imbalance must exist between the forces that call for change," (Buckway & Sowerby, 2023, p. 424). This imbalance

occurs when restraining forces, or factors that are against changing, weigh more than the driving forces that are advocating for change. In order to regain balance in the system, the driving forces must work to transform the restraining forces so that they agree with the proposed change. Lewin's theory offers a model to succeed this balance in three stages: unfreezing, movement, refreezing. Unfreezing is the act of identifying a person who is a passionate agent of change, becoming educated on methods to facilitate change, and gathering evidence to present to the restraining forces. The goal of the unfreezing stage is to decrease the resistance to change by appealing to the restraining factors. Movement is the act of identifying and developing plans for change, and then implementing them, adapting them, and navigating reactions. Refreezing is the final stage of Lewin's theory that aims to maintain the new balance in the system when the change is accepted and has been in practice for at least 3-6 months. The overall goal of Lewin's theory of change in nursing is to promote thoughtful, effective, and essential change.

The current nursing issue being addressed is the lack of CPGs at the SCED for nurses and providers to easily access and use. The proposed solution is to create CPGs that are relevant to the clinical environment, practical for everyday use, easily accessible, and cohesive with current standards of care in the SCED. Lewin's Force Field Theory of Change will be applied to achieve this solution by 1) unfreezing the SCED nursing staff so that they are open to learning about CPGs from a passionate driving force, 2) making progressive movement in the research and creation of new CPGs, as well as educating SCED nursing staff on the benefits of using CPGs, and 3) refreezing the nursing staff after the creation of new CPGs that are positively accepted in the SCED.

The methods used to accomplish this were through interviews with nursing staff and the creation of new, evidence-based CPGs, with the hope that they will be implemented into

practice. Daily staff nurses and charge nurses were interviewed about how they currently access SOPs and translate them into practice. They were also asked if they knew of and understood the purpose of CPGs. Then, nursing staff were asked what their preferences would be for CPG topics. Finally, extensive research was conducted on the proposed medical topics in preparation for the creation of CPGs for these topics. The current SOPs at the SCED for these medical topics were also reviewed to ensure that the CPGs would be cohesive with current practices in the SCED. However, additional EBP recommendations were also added to the CPGs if they were not already addressed in the SOPs. To determine the credibility of sources for the CPGs, only certified and accredited American organizations were used. These included the AHA and the American College of Emergency Physicians. During the development of these CPGs, the nurse clinician of the SCED was consulted to ensure the accuracy of information. Once the CPGs were complete, the nurse clinician was consulted again to begin the process of implementing these CPGs into nursing practice at the SCED.

Results

The nursing staff at the SCED were very responsive to answering questions about CPGs. Daily staff nurses and charge nurses confirmed that it was difficult or impossible to find the fulltext SOPs that are used for clinical decisions. They stated that they simply remembered what was typically ordered for certain patient complaints and acted on that memory in addition to the provider's orders. Additionally, nurses stated that they used their knowledge and skills from nursing school and specialized certification classes to aid them in critical thinking and anticipating needs. The nurses were unsure where the provider's received their information to order certain tests and treatments. Nurses confirmed that they knew of CPGs but denied having any at the SCED. The primary example that nurses could provide for a CPG were the advanced cardiac life support dysrhythmia and arrest CPGs by AHA. Daily staff nurses and charge nurses stated they would be very receptive to having CPGs available for use in the SCED. The three most requested topics for CPGs were acute coronary syndromes, strokes, and systemic infection and sepsis. When the nurse clinician was contacted about creating CPGs for the SCED, she was also very receptive to this idea. However, she did warn that the approval of these documents was outside of her management abilities, and she would have to refer the CPGs to the Director of Nursing at the SCED. The nurse clinician provided the full-text resources for the current SOPs in the SCED. She was unable to explain why daily staff nurses and charge nurses did not have access to these full-text documents. Upon the positive feedback from nurses at all levels, three CPGs were created to address the issue of not having any evidence-based decision trees for acute coronary syndromes, strokes, and systemic infections and sepsis. These are shown in Figures 1, 2, and 3 at the end of this paper.

Barriers and Future Considerations

The proposed solution and accompanying results for the nursing issue identified at the SCED are expected to be very beneficial for both staff and patients. However, due to time constraints, the CPGs that were created have not been formally implemented at the SCED. This is due to the need for high level nursing management to approve the CPGs for official use. The nurse clinician is hopeful that these will soon be accepted and is excited to see improvements in safety and quality outcomes. Because these CPGs are not yet available for nurses to use, this creates a barrier to the full results of this research. Ideally, this research will continue with a survey to nursing staff asking about the accessibility of these CPGs, the frequency of use, nursing staff attitudes and perceptions of the CPGs, and the interest for more CPGs. Additionally, the nurse clinician will be asked about improvements to safety, quality outcomes,

and cost-reduction associated with the CPGs. These surveys would ideally take place 3-4 months after implementation, in accordance with the third stage of Lewin's change theory. With these survey results, it would become known how helpful these CPGs are in comparison to the SOPs currently used in the SCED. Other potential barriers that might occur during the implementation process of the CPGs is resistance by daily staff nurses as well as clinical providers. For example, medical staff who have been used to the SOPs for many years may not believe that CPGs are different or better. This barrier would be addressed with educational in-services about EBP and CPGs to ensure that provider order expectations are aligning with recommendations in the CPGs.

Conclusion

The goal of this research paper was to create an efficient and lasting solution to the problem of nurses at the SCED not having access to CPGs to use throughout the nursing process. Through the employment of Kurt Lewin's first two stages of his nursing change theory, this goal was successfully met with the creation of three CPGs based on survey results from SCED nurses and leadership. Despite the current barrier preventing these CPGs from being readily available for nurses now, considerations for the future have been listed to guide further research on this topic and its final outcomes. The initial hypothesis still stands that these CPGs will increase safety and quality outcomes for patients, decrease healthcare expenditures for patients and the healthcare organization, and encourage critical thinking and problem-solving skills for nurses.

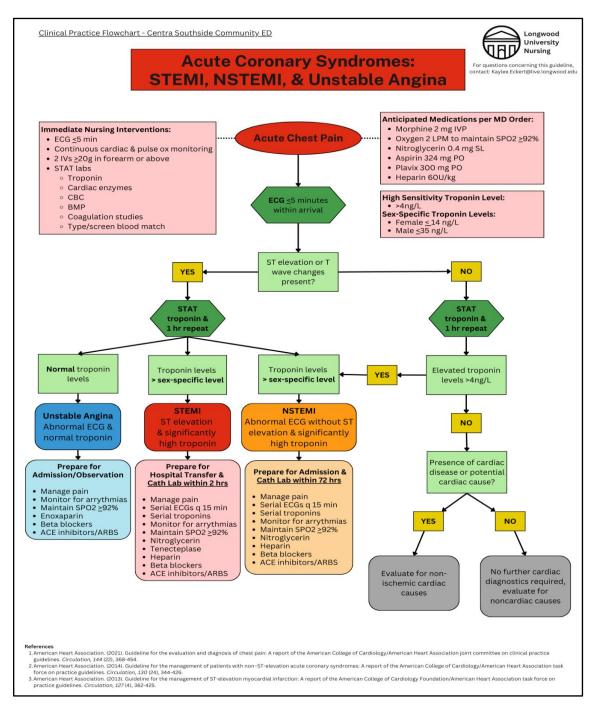


Figure 1. This CPG covers acute coronary systems and includes the best and most recent evidence-based recommendations for assessments, interventions, and treatments. The guideline is based on research by the AHA and the SCED SOPs.



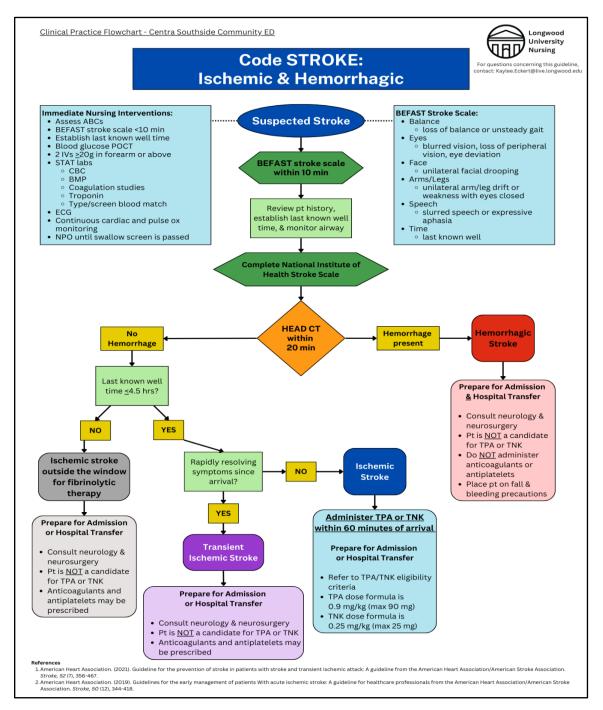


Figure 2. This CPG covers strokes and includes the best and most recent evidence-based recommendations for assessments, interventions, and treatments. The guideline is based on research by the AHA and the SCED SOPs.

Figure 3.

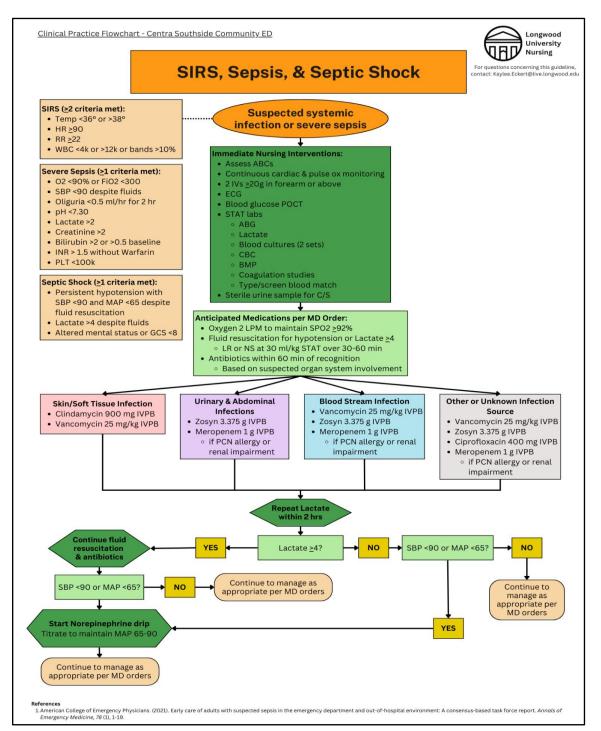


Figure 3. This CPG covers systemic infections and sepsis and includes the best and most recent evidence-based recommendations for assessments, interventions, and treatments. The guideline is based on research by the American College of Emergency Physicians and the SCED SOPs.

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