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Subject area: Nursing

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Title: Quality Improvement Plan, Resources and Conclusion

Instructions: introduction. briefly review your practice problem and include a purpose statement. • evidence-based practice plan explanation o provide a detailed explanation of the evidence-based practice performance improvement plan that you will be use to address the practice problem. o support your plan with scholarly references • resources (completed in week 5) o describe the resources needed to support the change in practice such as personnel time, supplies for staff education, cost of new equipment, or cost of software. o explain why each resource is necessary. • conclusion o discuss all key points addressed in this assignment.

Focus: the quality improvement project identified for my practicum experience is implementing peer-to-peer tutoring and a nurse-to-nurse checklist to promote compliance with evidence-based central venous catheter care to reduce clabsi rates. this checklist has proven to improve adherence across all aspects of the central line maintenance care (kellish, sabo..., 2018) for this project, the fade model will be used to implement the quality improvement project to improve central venous catheter (cvc) care amongst nurses in the medical-surgical division of a medical center in new jersey. the measurement for the project's success will be measured by the reported clabsi rates and the results of audits for compliance performed by nursing leadership and nurse champions. the participants of the quality improvement project are the nurse leaders, unit champions, and the infection control department. the first two steps of the improvement plan will focus on the problem and analyze the data available; the medical center reported a 2.23 per 1000 days clabsi rate for the year 2020 (quality score card, 2021). the policy clearly states to perform daily chg baths, alcohol-based swab caps on all unused access ports, and the practice of scrub the hub when accessing ports regardless of swab cap presence. however, the analysis of the discussions with leadership compliance was not consistent, and according to the infection control department, clabsi's remain. after speaking with my colleagues and mentor, developing an education session for the nurse leaders and two nurse champions from each medical-surgical division's

units would be the first step in the implementation process. the education sessions would be short and instructing the nurse leaders and project champions on using the nurse-to-nurse checklist and the importance of their role in the process. adherence to evidence-based central line maintenance practice remains a challenge. a checklist can improve nurse compliance to evidence-based practice of cvc care, can be improved by using an observational checklist to identify areas of nonadherence (kellish, sabo..., 2018); these checklists create opportunities for real time intervening and coaching by peers and leadership. nurse champions will be taught how to coach peers successfully. nurse leadership will be trained in effective auditing strategies and report results for data collection and evaluation of the project. after all, in-person education sessions were completed, informing all the frontline staff of the new checklist process and a specific start date for the project to begin via emails and daily huddles. the last interventions of this plan are to execute and evaluate the success or failure. once the nurse leaders, the unit champions, and the frontline staff were educated correctly, the nurse-to-nurse checklist can be put into use; each unit would report daily on the cvc devices and the audits. bi-weekly sessions with the nurse champions to discuss coaching barriers and successes of coaching sessions can be addressed. the infection control department can use benchmarking and flow charts to display each units' data results. the success of the quality improvement project to prevent clabsi can be evaluated with this measurable data and compared to the subjective data received from the project's participants.

Quality Improvement Plan, Resources and Conclusion

Name

Institutional Affiliation

Course

Instructor

Date

Introduction

Central line Associated Bloodstream infection (CLABSI) is a substantial contributor to the high morbidity, death, costs of health care and stay for hospitalized patients. CLABSIs are among the worst of the numerous types of hospital-acquired diseases with an estimated fatality rate of 12-25% per infection. The use of central vein catheters is a key part of today's medical care worldwide (CDC, 2020). Central line insertion provides access to and hemodynamic monitoring for hemodialysis, facilitates the provision of medicines, fluids, blood transfusions and parenteral nutrients. CLABSI is the consequence of the micro-organism proliferation on the outer surface of the catheter or the fluid route when or during use. Several microorganisms are involved in developing HAIs and CLABSIs (Ling et al., 2016). Although the incidence of CLABSI in health facilities all over the United States has decreased by 46 per cent between 2008 and 2018, over 50,000 CLABSIs are predicted to still happen each year at critical and acute healthcare institutions. In both in intensive and non-intensive care facilities, the use of central lines is prevalent. In the US, it is estimated that around 300 million catheters are used every year; about three million are central lines (Sabo et al., 2018). A CLABSI has a substantial financial strain. National efforts have been made to regulate protocols for preventing CLABSI. According to the CDC guideline for the management of central line related blood stream infections, the insertion, maintenance, and removal of central lines are the three major components in the reduction of CLABSIs (Feriani et al., 2021). The purpose of this paper is to develop an evidence-based practice quality improvement plan to address the problem and resources needed to support the change in practice.

Evidence-based practice quality improvement plan

The removal of CLABSIs is important in preventing the entry of pathogens into central lines. In the last 20 years, considerable efforts have been made around the world to create efficient evidence-based therapies to reduce the prevalence of CLABSIs (Aloush, 2018). Implementing CLABSI standards on prevention helps reduce the infection rate considerably. Nurses have a key role in the prevention of CLABSI, as they are accountable for the regular care and management of central lines in general (Pallotto et al., 2019). Care activities and adherence with policies and procedures based on evidence have a significant effect on patient results. In order to prevent harmful bloodstream, actions carried out and adhered to by doctors and nurses are vital (Reagan et al., 2019). This paper reviewed four nursing practices that help to CLABSI prevention. Interventions to be explored include: daily bathing using chlorhexidine, adjustments in catheter disinfection, and training and education initiatives for health workers (Burnham, Rojek & Kollef, 2019).

Resources needed to support the change in practice

Chlorhexidine Bathing

Chlorhexidine gluconate (CHG) is an antibacterial liquid with a wide variety of CLABSI microorganisms including *Staphylococcus aureus* and *Enterococcus* spp. Patients' skin is regarded as a key repository for CLABSI infections. CHG reduces the prevalence of microorganisms on the surfaces of cells and minimizes the subsequent infections of central lines in the environment (Aloush, 2018). In addition to standard antiseptics and soap, the CHG solutions linger on a patient's skin for a more prolonged timeframe and act to defend the patients after bathing. As CLABSIs are generally the outcome of organisms migrating from and into the

bloodstream through the skin, routine skin disinfection through CHG bathing may decrease the occurrence of CLABSI (Sabo et al., 2018).

Training and education

Comprehensive education and training of health professionals is a critical part of CLABSI prevention. The need of cross-disciplinary treatment and understanding of updated CLABSI recommendations for prevention through the training of healthcare professionals should be emphasized (Ling et al., 2016). Although the prevention of CLABSI requires good instructional efforts, research reports that nurses have limited awareness of these guidelines. In the future, the absence of relevant knowledge could influence compliance with CLABSI prevention guidelines and raise CLABSI rates. While training and education is considered to be central to CLABSI prevention, the ideal way to nurse education and training is not clearly outlined. A systematic approach to central line care, nurse education and training will improve patient care and eliminate possible CLABSI events (Aloush, 2018).

Standardized Dressing Maintenance

Once a central line is inserted, a sterile dressing is used to cover them. Dressings are used to maintain the central line appropriately, so they do not dislocate and so that infection is avoided. Different types of dressings might be employed to protect central lines. Certain devices include: sterile gauze equipment, polyurethane apparels, gluconate infused dressings with chlorhexidine and hydro colloid dressings (Feriani et al., 2021). Although numerous types of dressing materials are used for central line preservation, they must be appropriately managed in order for infections to be avoided. Caregivers are accountable for identification and replacement

of damaged dressings as directed. Precise evaluation of sites for dressings and line insertion, timely identity of soiled sites and the correct aseptic substitution of settings are critical measures for the prevention of CLABSI (Reagan et al., 2019). It is vital that nurses are aware of central dressing and are competent in dressing skills to avoid infections of the bloodstream.

Disinfection of Catheter Hubs

An critical facet of preventing central line intraluminal infection is to ensuring that the catheter hub is properly disinfected before usage. The core of the catheter corresponds to the center line end which is connected with other IV lines or a cap (Pallotto et al., 2019). If the hub of any valve access device is not adequately sanitized before use, micro-organisms could be transmitted into the catheter's lumen. Applying an antiseptic hurdle cap in a continual passive disinfection to sanitize the catheter hub is an alternate way of cleaning a catheter hub with a mixture of alcohol based for 10 to 15 seconds (CDC, 2020). The design enables the catheter hub to continue to be disinfected, ensures secure access to the hub when the cap is withdrawn out of the hub and hence lowers the risk of invading microorganisms at the hubs. This procedure, if properly applied, reduces the possibility of the central line's intraluminal impurity (Feriani et al., 2021).

Conclusion

The CDC and the Care Quality commission have established CLABSI's central line maintenance recommendations. However, in United States health facilities there is a lack of coherence and application of recommendations. CLABSI preventive guidelines have been adopted in many healthcare institutions, though procedures differ from institution to institution.

Furthermore, it is not regularly reviewed the routine evaluation of nursing training and expertise in the development of central care. This paper has explored existing central line care procedures and tries to outline a desirable central line care nursing practice that can be employed to prevent CLABSIs.

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