NRS 445 Rough Draft - Research Critiques and Evidence-Based Practice Proposal

Name

Grand Canyon University

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Research Critiques and Evidence-Based Practice Proposal

Evidence-based practice in nursing is important because it enhances positive patient care outcomes. The things gained by the nurses in care and leadership are used to develop a keen eye to identify the weak areas, thereby needing improvement through implementing evidence. The organizations put a lot of effort into building a conducive environment to ensure best practices in the above efforts toward better safety, quality, and efficient outcomes. Some health issues include catheter-associated urinary tract infections (CAUTIs) that, in effect, affect the patients, systems of health, and the provided nursing care.

Thus, some populations have reported more significant rates of CAUTI, predominantly patients residing in long-term care facilities with chronic conditions. Therefore, nurses need to understand and implement best practices around this vulnerable population to evade incidences of CAUTI. CAUTIs are common infections associated with health among patients with in-dwelling catheters. Among the common health-associated infections experienced by most patients with in-dwelling catheters are CAUTIs. This literature review outlines the best practices, including CAUTI bundles, which should be put in place out of the normal to prevent CAUTIs and related rates mitigation in long-term care settings. Other factors leading to the development of CAUTI are prolonged catheterization, unsterile procedures when doing the catheter insertion, as well as contamination from stooling (Ling et al., 2022).

The subsequent effect of CAUTIs extends to the patients, their families, as well as to the health organizations, making it a substantial disease burden. 9% by proportionality of all hospital-acquired infections account for CAUTIs, adding to care costs mainly through extended hospitalization and provision of complex care. Moreover, CAUTIs can result in complications affecting the bladder, septicemia, and premature mortalities. Despite being preventable, an unexplored area is how effective bundle interventions could prevent and reduce CAUTIs in

healthcare settings, especially in practice sites. This, therefore, forms the focus of the project.

PICOT Question

What is the incidence of CAUTI within an eight-week period in debilitated patients who are admitted to long-term care units and use indwelling catheters, and how do these compare with patients whom CAUTI bundles are used as opposed to the patients who do not have the securement and positioning of the catheter?

Quantitative Studies: Methods

The literature review depended on two quantitative studies where one of the research was carried out by Van Decker et al. (2021), while the other was conducted by Ling et al. (2022). (Ling et al., 2022) conducted research on appraising the effectiveness of an approach in averting Catheter-Associated Urinary Tract Infections (CAUTIs) in the Intensive Care Unit through bundled measures. The tilt of evaluating the approach emanated from the lean noticed in CAUTIs concerning the benchmark data. Specifically, the institution documented 13 CAUTIs, surpassing the hospital benchmark of 4 or fewer CAUTIs annually. In particular, the project aimed to achieve a 30% decrease in cases of CAUTIs, a 20% reduction in the total days with urinary catheters, and a positive compliance rating of the intensive care unit on matters relating to catheters up to 75%.

(Ling et al., 2022) have used proper methods in the study, taking pre-post form of design being conducted throughout two continuous periods of 4 months. Data was collected from patients aged 18 years and above, with a majority being those admitted into the intensive care unit carrying catheters. Interventions included the nurse-only removal protocol and staff education on an indwelling urinary catheter, with an additional intervention being an electronic daily checklist. The statistical results were analyzed using a mixed statistical technique that comprised Fisher exact tests and independent sample t-tests. Further to the project objective of

best sizing up the impact of bundle interventions on rate and supporting best practices in addressing CAUTIs, the design choice is pre-post design.

Another reviewed literature is quantitative research by (Van Decker et al., 2021). The research was conducted in Boston Medical Center, targeting to reduce CAUTI rates in intensive care units through bundled five interventions. These included new catheterization and maintenance procedures, the indications for catheter insertion, proper testing for CAUTIs, alternatives to indwelling devices, as well as sterilization techniques. Unit nursing supervisors were making daily rounds to ensure that they were doing the catheterization correctly. According to Van Decker et al. (2021), interventions fit as they depict how such nurse-led bundle strategies can work to combat CAUTIs.

Qualitative Studies: Methods

In the literature review, qualitative studies were Verma (2019) and Parker et al. (2020). In the Verma (2019) study, the focus was drawn to persistent issues of identification and removal of unwarranted catheters within a healthcare environment, thus applying a multimethod qualitative approach. The study involved conducting face-to-face interviews and direct observations of clinicians in a large hospital, shadowing the nurses during shifts, turnover, and admissions, and observing doctors in the day's routine. The data from observations was unstructured field notes, while semi-structured interviews were recorded on audiotapes and transcribed accordingly. All of these investigative data were analyzed through the use of qualitative content analysis in a manner that identified the main themes, with results from this study being kept in context according to the scientific standards set. For example, using multimethod qualitative approaches, unstructured field notes, and semi-structured interviews ensured that the information gathered was pertinent and true to the point of hindrances of catheter removal.

Parker et al. (2020) investigated the experiences of clinicians implementing multifaceted bundled urinary catheter care interventions in four acute care hospitals in New South Wales, Australia. The authors implemented the catheter care bundle in all adult inpatient wards, operating theatres, and emergency departments within the four hospitals. The researchers used a pre- and post-intervention study design to implement the catheter care bundle. The authors designed the mentioned health project to help them inform challenges and successes that they derived from the implementation process.

These interventions were packed in this research to help strengthen clinicians' decision-making concerning catheter insertion, maintenance and removal. These focus groups were aimed to conceptualize implementation from the perspectives identified by the clinicians and to identify barriers and facilitators towards successful implementation across these four hospitals. The selected interventions for this research serve the objectives of the project. For example, the bundling of the interventions contributes to pinpointing their effectiveness in addressing the expected changes in that project.

Summary of Findings

Parker et al. (2020) describe the challenges associated with the bundle intervention implementation and classify them into several themes. These include early and sustained engagement of the critical stakeholders, effective planning not at the expense of being adaptable, addressing the burden of change to practice together with adoption and sustainability of the changes that have been implemented.

In the research conducted by (Verma, 2019), various themes emerged concerning obstacles to identifying and removing unnecessary catheters. These challenges encompass difficulties in locating, inaccuracies, or unavailability of catheters, low priority given to catheter removal, confusion regarding the authority responsible for removal, lack of consensus and

awareness regarding standard protocols and indications for removal, and communication barriers.

Hence, it concludes the span of intervention with the implementation of bundle interventions, resulting in a reduced infection rate of 1.33 per 1000 catheter days (Ling et al., 2022). Also, there was a rate of increase in catheter days that was statistically non-significant, recording 10.5%. Of most note, compliance with documentation improved by a wider margin, from the recorded 50.0% before the intervention to 83.3% during the intervention.

The evidence that would support these would rely on the significant reduction of Catheter-Associated Urinary Tract Infections (CAUTIs) from 53 cases in 2013 to 9 cases in 2017 due to the implementation of the bundle interventions. This approach also led to a noteworthy 33.8% reduction in the use of indwelling catheters. The successful strategies implemented, including CAUTI awareness education, adherence to insertion and other removal protocols, and introduction of Pure Wick female incontinence devices, have reduced the rates significantly.

Anticipated Outcomes for PICOT Question

The expected outcomes of the PICOT question relate to the primary expectation that there would be a reduction rate in CAUTI within the long-term care facilities in the implementation of the bundle interventions. Many studies have reported a reduction in the rates of CAUTI with such interventions that include (Verma, 2019) and (Ling et al., 2022). Another anticipated outcome involves exciting an enhancement in providers' understanding of indications, contraindications, and proper care for indwelling catheters through education measures within the bundle interventions.

In addition, interventions that educate and train as a bundle will enhance providers' knowledge of safe indwelling urinary catheter utilization. The third implication is the reduced duration of inpatient stay and fewer related hospitalization costs for those patients with

indwelling urinary catheters. Studies by Ling et al. (Verma, 2019) have linked CAUTIs to prolonged duration of a hospital stay as well as escalated costs of care. By effect, the interventions bundled seek to reduce and prevent CAUTIs for enhanced efficacy in long-term care facilities.

Comparison of Outcomes of the Selected Studies to the Anticipated PICOT Outcome

The findings of the selected studies align with what was expected in the PICOT statement. For instance, bundle interventions (Ling et al., 2022) eradicated CAUTIs during their implementation, supporting what was expected from the PICOT. Data on training healthcare providers to prevent CAUTIs have also been reported (Van Decker et al., 2021) and to improve their knowledge of the proper use of indwelling urinary catheters. At the same time, Parker et al. (2020) and (Verma, 2019) outlined potential barriers to implementing provided bundle interventions. Thus, all the selected studies informed the findings identified in the PICOT statement.

The Link between the PICOT Question, Research Articles, and Identified Nursing Problem

This available evidence articulates that the critical nursing issue at hand in CAUTI is whereby an elevated risk for CAUTIs is observed in patients with indwelling catheters who are at the HBU. CAUTIs may lead to long stays of patients in the hospital and cause increased costs, more vulnerability to other adverse complexities, and even premature deaths ((Verma, 2019); (Ling et al., 2022)). Best practice should be nurses' practices in the effective prevention of CAUTIs. They constitute some of the selected research articles and represent an understanding of the overall effectiveness of bundle interventions for preventing and reducing CAUTIs. Further, they gave insights into the potential barriers to implementing the proposed changes in the project. Conversely, the PICOT question determines whether the bundle interventions effectively prevent or reduce CAUTIs. Thus, it captures the whole frame of the

PICOT question, research articles as well as identification of the nursing problem.

Proposed Evidence-Based Practice Change

The recommended evidence-based change in practice would be to adopt a 'bundle' of interventions for the prevention and reduction of the incidence of CAUTIs in long-term care settings, which includes nurse's education on appropriate needs and not needing urinary catheters, the indications and contraindications of its use, their evaluation, caring of them and removal. Furthermore, the proposal involves introducing a daily plan for managing indwelling urinary catheters and on a daily round for implementing a nurse-driven plan with directives on removing the catheters. Best practices in inserting, caring, and removing catheters have been enforced to combat CAUTIs. This is because the proposed change will be done through staff training which will equip individual skills in assessing the necessity of indwelling urinary catheterization and those of providing care for and removing the same. Again, the proposed change that is to be undertaken is strongly evidence-based, as findings from studies reviewed so far attest to it.

Conclusion

In essence, the articles under consideration endorse the implementation of bundle interventions to tackle CAUTIs in long-term care facilities. These interventions prove effective in diminishing and averting CAUTIs. The expected PICOT outcomes for the project encompass decreasing and preventing CAUTIs, heightened awareness among providers regarding CAUTI prevention and reduction, and reduced hospital stay duration and associated costs for patients with indwelling urinary catheters. Consequently, the findings substantiate the suggested change involving the incorporation of bundle interventions into the project.

References

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