

Effectiveness of Nursing Care Bundle on Prevention of Catheter Associated Urinary Tract Infection(CAUTI) among Patients with Indwelling Catheter at Selected Hospitals, Salem.

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Abstract

An experimental study was done to evaluate the effectiveness of Nursing Care Bundle on Prevention of Catheter Associated Urinary Tract Infection among patients with Indwelling Catheter at selected hospitals, Salem. Quasi experimental non randomized control group post test only design was used for this study. Sixty patients were selected through Non Probability Purposive Sampling Technique. Among Sixty patients 30 patients from Sri Gokulam Speciality hospital, Salem were selected for experimental group and 30 patients from Sri Gokulam Hospital, Salem were selected for control group. The investigator provided nursing care bundle for 5 days to the experimental group. Control group received routine catheter care. Post test assessment was done on 6th day, both in experimental and control group by using Observational Checklist. The findings revealed that in experimental group 8 (26.66%) patients had no infection, 13 (43.33%) patients had mild infection, 6 (20%) patients had moderate infection and 3 (10%) patients had severe infection. In control group none of the patient had no infection, 2 (6.66%) patients had mild infection, 10 (33.33%) patients had moderate infection and 18 (60%) patients had severe infection. In experimental group the post test mean score was 2 ± 1.59 and the mean percentage was 28.57. in control group the post test mean score was 4.6 ± 1.2 and the mean percentage was 65.71. The difference in mean percentage was 37.14. The calculated 't' value was 7.58 which was greater than table value (2.0). Hence the research hypothesis H_1 was retained at $p \leq 0.05$ level. Thus it became significantly evident that the nursing care bundle was effective in preventing the catheter associated urinary tract infection among patients with indwelling catheter. There was no association in experimental and control group on Catheter Associated Urinary Tract Infection with their selected demographic & clinical variables. The study concluded that nursing care bundle was effective in reducing the Catheter Associated Urinary Tract Infection among patients with indwelling catheter.

Key Words – Effectiveness, Nursing Care Bundle, Catheter Associated Urinary Tract Infection, Indwelling Catheter

Background of Study

Catheters are one of the most commonly used medical devices. However, these devices are notoriously prone to infection^[1]. As one of the more prevalent health care associated infections (HCAIs) in the world, catheter associated urinary tract infections (CAUTIs) represent a considerable burden of morbidity^[2]. The National Healthcare Safety Network (NHSN) has reported that Urinary Tract Infections (UTI) is the commonest type of Healthcare-Associated Infections (HAI) and majority of them (75%) is associated with an indwelling Urinary Catheter (UC). Prolonged use of Urinary Catheter is considered as the most important risk factor for developing CAUTI^[3]. According to the CDC in the USA approximately 1.7 million patients gained HAIs, and about 100,000 patients die annually due to CAUTIs^[4]. In India, CAUTI is the second, most commonly occurring infection. The prevalence of CAUTI in the acute care setting is directly linked to the widespread use of indwelling catheterization in that setting^[5]. A bundle of care is a structured method of improving patient care processes which includes a group of three to five evidence-based practices that when performed consistently and collectively can have a positive impact on patient outcomes. The roles of nurse in catheter care are comprehensive assessment, prevention of infections and management of catheter associated UTIs. To put an end to this debilitating complication of Indwelling Catheter, the investigator interested to assess and prevent the Catheter Associated Urinary Tract Infection(CAUTI)

Objectives

- 1) To assess the Catheter Associated Urinary Tract Infection (CAUTI) among patients with indwelling catheter in experimental and control group.
- 2) To evaluate the effectiveness of Nursing Care Bundle on prevention of Catheter Associated Urinary Tract Infection (CAUTI) among patients with indwelling catheter in experimental group and control group.
- 3) To associate the level of Catheter Associated Urinary Tract Infection (CAUTI) among patients with indwelling catheter with their selected demographic variables in experimental and control group.

Hypotheses:

H₁- There is a significant difference in post test score on Catheter Associated Urinary Tract Infection among patients with indwelling catheter in experimental group and control group at $p \leq 0.05$ level.

H₂-There is a significant association between the post test score on Catheter Associated Urinary Tract Infection among patients with indwelling catheter in experimental and control group with their selected demographic variables at $p \leq 0.05$ level.

Methodology Adopted

Research Design & Approach:

Quasi experimental non randomized control group post test only design with Quantitative approach.

Setting of the study:

Sri Gokulam Speciality Hospital and Sri Gokulam Hospital, salem.

Sample size:

Sample size of the study includes 60 patients with indwelling catheter. (Sri Gokulam Speciality Hospital for experimental group-30 & Sri Gokulam Hospital for control group-30). Selected by purposively.

Funding: The Funding for the present study by the investigator herself.

Ethics Approval: Written permission was obtained from the Managing Director of Sri Gokulam Hospitals, Salem.

Consent to participate: The purpose of the study was explained to the patients and written consent was obtained.

Consent for publication: As this is a original study the investigator willingly publishing this article.

The tools used for the study were,

- Semi structured interview schedule for demographic variables and clinical variables
- Observational checklist to assess the Catheter Associated Urinary Tract Infection.

Findings

- The demographic variables reveals that majority of patients 12 (40%) were between the age group of 31-40 years in experimental group and in control group 11 (36.66%) patients were in the age group of above 50 years. Majority of patients in both experimental and control group 16 (53.33%) patients were male. In experimental group majority of patients 27 (90%) and in control group 21 (70%) patients were Hindu. In experimental group majority of the patients 25 (83.33%) and in control group majority of the patients 26 (86.66%) were married. In experimental group 16 (53.33%) patients had no formal education whereas in control group 10 (33.33%) patients had graduate degree and 10 (33.33%) patients had higher secondary education. Most of the patients in experimental group 12 (40%) were unemployee and in control group 10 (33.33%) patients were private employee. Most of the patient in experimental group 11 (36.66%) patients have their family monthly income between Rs. 15001-20000 and in control group 12 (40%) patients have their family monthly income between Rs. 5001-10,000.
- The clinical variables reveals that majority of patients in experimental group 11 (36.66%) patients had no co morbid illness and in control group 10 (33.33%) patients had hypertension. Most of the patients in experimental group 25 (83.33%) and in control group 17 (56.66%) patients had no history of renal disease. Most of the patients in experimental group 17 (56.66%) and in control group 27 (90%) patients were in use of antibiotics. Majority of the patients in experimental group 14 (46.66%) patients catheterized for immobilization and in control group 17 (56.66%) patients catheterized for medical condition.
- In experimental group 8(26.66%) patients had no infection, 13(43.33%) patients had mild infection, 6(20%) patients had moderate infection and 3(10%) patients had severe infection. In control group none of the patients had no infection, 2(6.66%) patients had mild infection, 10(33.33%) patients had moderate infection and 18(60%) patients had severe infection. In experimental and control group the mean score was 2 ± 1.59 and 4.6 ± 1.2 respectively. The calculated 't' value was 7.58 which was greater than the table value (2.0). Hence the research hypothesis H_1 was retained at $p \leq 0.05$ level.
- Both in experimental and control group there was no significant association found between catheter associated urinary tract infection and their selected demographic and clinical variables such as age, gender, religion, marital status, education, occupation, family monthly income, co-morbid illness, history of renal disease, use of antibiotics and indication of catheterization. Hence research hypothesis H_2 was rejected.

Conclusion:

The present study was done to evaluate the effectiveness of nursing care bundle on prevention of Catheter Associated Urinary Tract Infection among patients with Indwelling Catheter at selected hospital, Salem. The findings of the study revealed that nursing care bundle was effective in preventing the catheter associated urinary tract infection among patients with indwelling catheter. There was no significant association between the catheter associated urinary tract infection with their selected demographic and clinical variables in experimental and control group. Hence research hypothesis H₂ was rejected at $p \leq 0.05$ level.

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BIOGRAPHY



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