

Comparison of Pre- and Post-Training Test Scores for Combined Care for Catheter-Associated Infections Skills among Nursing student



Wan-Chi Hsu¹, Feng-Ping Hsu²

¹ Asistent Head Nurse, *National Cheng Kung University Hospital, College of Medicine, National Cheng Kung University, Taiwan*

² Head Nurse, *Department of Nursing, National Cheng Kung University Hospital, College of Medicine, National Cheng Kung University, Taiwan*

Background

A significant issue was identified in the surgical wards of a hospital in Southern Taiwan, particularly in the neurosurgery unit, related to the number of catheter usages and the associated infection rates. A notable discrepancy was observed between the catheterization techniques practiced by nursing interns and the clinical standards, potentially contributing to the increased incidence of catheter-associated infections. From 2020 to 2022, annually, about 6 to 8 groups of nursing interns would come to the unit for their internship, each lasting approximately 12-15 days with around 6-7 people per session. During their internship, students would perform catheterization techniques and care for patients with indwelling catheters. A review of the nursing interns' catheterization techniques and care process conducted from July 10 to July 28, 2023, revealed inconsistencies between the catheterization standards taught in school and those practiced clinically.

Method

A comprehensive improvement plan was developed. This plan included on-site checks, pre- and post-tests, and monitoring through specially designed forms. A key component was the introduction of a "Combined Care for Catheter-Associated Infections" test, accompanied by targeted educational courses and assessments for the nursing students.

Purpose

There are many factors associated with catheter-related urinary tract infections (CAUTI). In addition to the patient's underlying disease factors, these include the nurse's cleaning and disinfection before catheter insertion, the sterile technique during insertion, and the daily care of the catheter. By identifying the skill gaps between academic education and clinical practice, we hope to enhance nursing students' care for catheter-related urinary tract infections.

Results

Post-implementation of the educational initiatives, there was a significant improvement of nursing interns related to catheter care, both in the pre- and post-tests. The accuracy rate for the combined care of catheter-associated urinary tract infections reached 93%, which was close to the target threshold of 90%.

Conclusions

The intervention demonstrated that standardized training and continuous quality monitoring substantially enhanced the catheterization skills and care quality among nursing interns. The findings underscore the efficacy of structured training and assessment in elevating nursing care standards. However, further analysis and improvement are necessary for scenarios where the standards were not met, and refinement of the training programs.

Keywords : CAUTI, Catheter-Associated Infections Skills, Nursing student