



## EFFECT OF EVIDENCE BASED CLINICAL NURSING PRACTICE GUIDELINES ON PRACTICE OF NURSING PERSONNEL RELATED TO ORAL CARE OF CRITICALLY ILL PATIENTS

### Nursing

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### ABSTRACT

**Background:** Critical Care Nursing is a specialized field of Nursing requiring focused knowledge and technical skills, compassionate care and skilful practice. This study was designed to develop and test Clinical Nursing Practice Guidelines (CNPNG) for oral care of critically ill patients

**Methods:** Clinical Nursing practice Guidelines were formed with evidence sources and consensus from relevant stakeholders. Quasi experimental pretest posttest research design was used to assess the effect of CNPNG on oral care practice of Nursing personnel. Data was collected with non participant observation.

**Results:** Implementation of Clinical Nursing practice Guideline showed a significant difference in the oral care practice of nursing personnel.

**Conclusion:** The study highlights how evidence gathered from research studies can be translated into bedside care through Clinical Nursing Practice Guidelines. It also shows the effect of the CNPNG on practice of nurses.

### KEYWORDS

evidence based care, oral care, Clinical Nursing Practice Guidelines, ICU, critically ill patients, nursingpractice

### INTRODUCTION

Critical Care Nursing is a highly technical specialty of nursing geared towards assisting people to survive life threatening crises and it is a specialty which has evolved rapidly over the past few years. The care of critically ill patients has been explored by nursing researchers providing a rich pool of relevant information and evidence.

This pool of evidence can be utilized for the benefit of patients and family through implementation of 'Evidence based practice (EBP)'. Sackett et al 2004, defines EBP 'integrating individual clinical expertise with the best available external clinical evidence from systematic research.' It equips nurses to be contributing members of health team by improving processes and outcome (Thomas et al, 2000). According to Lawhorne (2008), it influences nursing care quality by functioning as a quality indicator thus providing a quality framework against which practice can be measured in relation to evidence. It enables autonomy in practice and independent decision-making in specified aspects and areas of critical care nursing (Rycroft, 2008 & Aitkin et al 2009).

EBP should affect the delivery of healthcare based on the integration of research, clinical guidelines and outcome assessments into clinical practice (DeBourgh 2001). A practical means of incorporating and implementing evidence in clinical area is the development of Clinical Nursing Practice Guidelines (CNPNG). CNPNG act as vehicles for transformation of research findings into useful, practical, essential, applicable care at the bedside by incorporating expert opinion and patient preferences. A study was undertaken to test the effect of CNPNG on the knowledge, attitude, satisfaction and practice of nursing personnel regarding selected aspects of nursing care of critically ill patients at the Surgical ICU of a multispecialty hospital. The results regarding the effect of CNPNG on oral care practice of nursing personnel is presented in this paper.

### BACKGROUND AND NEED FOR STUDY

Oral care has been traditionally associated with meeting self care and comfort needs of patients. Among critically ill patients, it has now been given a prime role in the prevention of Ventilator Associated Pneumonia. Oral care practices of nurses have undergone rigorous perusal due to their clinical significance. This gives rise to the need for implementation of evidence based practice.

Evidence has shown that 20-25% of care is not needed or is actually harmful. It was found that 30- 40% patients do not receive care based on current scientific evidence ( Grol R & Grimshaw J, 2003). Though many studies are done to improve practices of caring for critically ill patients, the results of those studies remain on the shelves of libraries or in databases and very few reach the bedside and are translated into evidence based practice.

CNPNG enable Nurse Managers to introduce EBP to nursing staff and enhance research utilization in practice. CNPNG help in utilization of research, standardization of care, improvement in patient outcome, promotion of interdisciplinary collaboration and quality assurance. CNPNG was considered as the need of the hour by the investigator as there were no documented evidence based nursing guidelines available. A study to assess the effect of CNPNG on the practice of nurses was thus conceived.

### METHODOLOGY

Experimental approach was used to test the effect of CNPNG on oral care practices of nursing personnel.

- A. **Design of study** - Quasi experimental pretest posttest design was used to assess the effect of CNPNG.
- B. **Setting**- The study was conducted in the Surgical ICU of a large multispecialty hospital where pre operative and post operative patients who are critically ill and require monitoring and multi organ support are admitted.
- C. **Population, Sample, sampling criteria and sample size**- 57 Nurses working in the SICU who fulfilled the inclusion criteria were selected by consecutive sampling.
  - 1) **Inclusion criteria**
    - a. Registered nurses working in SICU during the data collection period with at least one month experience.
    - 2) **Exclusion criteria** – Nurses on leave during the study phase of introduction of the intervention.
      - a. Nurses who resigned during the study period
      - b. Nurses who did not consent to be part of the study

### D. Data collection method

During the **pre-intervention stage**, the investigator assessed the practices of nurses caring for critically ill patients using an observation checklist.

The investigator used the lot method to choose a Nurse to observe every day. As nurses rendered care in teams of two, the nurse who teams up with the chosen subject was also observed using non participant observation while they rendered oral care to their patients. Their names were removed from the sampling frame after observation. This method of selection continued till all the nurses enrolled for the study were assessed for their practice.

The **intervention stage** consisted of implementation of CNPNG for a period of three months. The investigator dedicated the entire time for effective implementation of the guidelines. Nurses in SICU currently function in teams. The members in each team were addressed together for all the interventions. Every team underwent standardized interventions with the same module, same methodology and same time

as given below.

- a. Orientation & sensitization session for nurses in groups of ten to twelve for 15 min.
- b. Educational sessions for nurses in groups of 12 for focussed teaching.
- c. Designating the Nurse Manager, the Charge Nurses and 'Shift In-charge' Nurses as 'EBP champions' to reinforce CNPG.
- d. Simulated demonstration of oral care by EBP champions followed by evaluated return demonstration from every nurse.
- e. Use of media for reinforcement: whats app messages as Nuggets for today.
- f. Incorporation into Continuing Nursing Education – daily presentations, written and group quiz, role play, demonstration & simulation.

During the **post intervention** stage, the co-investigator assessed the oral care practices in terms of nursing care of critically ill patients using the same observation checklist. The inter-rater reliability was established before the study.

**E. Description of instrument and interpretation of scoring**

The practice of staff nurses was assessed using an observation checklist which consisted of 15 practice statements with options 'Yes', 'No' and 'Not applicable' which were marked by the investigator. The option 'Yes' was assigned a score of '1' and the option 'no' was given a score of '0'. The score was interpreted as follows  
 >80% : Adequate practice, 60 – 80% : Moderately adequate practice, <60%: Inadequate practice

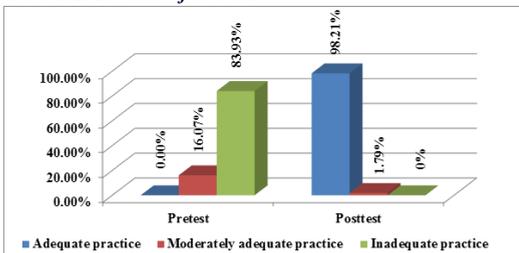
**F. Ethical consideration-** Approval was obtained from the College of Nursing research committee and the Institutional Review Board.

**G. Data analysis -** The quantitative data collected was analysed in terms of descriptive (mean, standard deviation, percentage) and inferential statistics (paired t-test).

**IV.RESULTS -** The results are presented in three sections.

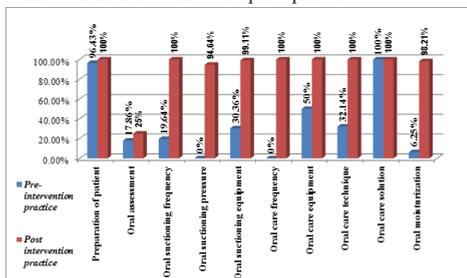
**A. Section 1. Demographic details of study participants**  
 91.22% study participants were of the female gender. Most of them ( 78.95% ) had Diploma Nursing qualification. 73.68% were married. 45.61% had 6 – 10 years of professional experience and 36.84% had 6 – 10 years of ICU experience.

**B. Section 2. Practice of oral care**



**FIGURE 1. Distribution of nursing personnel according to oral care practice during the pre intervention phase and post intervention phase**

Figure no.1 shows that 83.93% of the nurses had inadequate practice related to evidence based oral care of critically ill patients during the pre intervention phase. After the training, during the post intervention phase, 98.21% of the nurses had adequate practice.



**FIGURE 2. Compliance to Clinical Nursing Practice Guidelines related to oral care before and after intervention**

Figure no. 2 highlights the difference in the practice score related to various aspects of oral care before and after intervention. Compliance to the oral assessment guideline was only 25% post intervention. Compliance to other guidelines were above 90% post intervention.

**C. Section 3. Effect of Clinical Nursing Practice guidelines on practice of oral care for critically ill patients**

**TABLE I. COMPARISON OF PRETEST POSTTEST RELATED TO PRACTICE**

Practice	Mean	Standard deviation	p value
Pre-intervention	26.58	2.8	0.000*
Post intervention	69.5	5.7	

There is significant difference (  $p < 0.5$  ) in the practice of nursing personnel after implementation of CNPG.

**V. CONCLUSION**

The study highlights the translation of evidence into bedside practice. A culture of evidence based practice was introduced in the Intensive Care Unit during the intervention which led to high compliance to Clinical Nursing Practice Guidelines after the intervention. Oral assessment is a difficult task for nurses especially if tools such as torch are not present at the bedside for patients on endotracheal tubes. The study also showed that some aspects of care such as preparation of patients and the solution used for oral care were based on evidence even before the intervention. Nurses can be tuned to the habit of questioning practices and searching for evidence. It will also give them the confidence that their practice is based on evidence.

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