

# Knowledge and Practice of Nurses Related to Interventional Patient Hygiene In Critical Care Unit

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## Abstract

Critical care nurses are very hardworking, They always face tough time to integrate interventions, complicated technologies and apply care based on present evidence, while at the same time care for the overall person is a big challenge and morally conflicts associated with critical illness. Interventional Patient Hygiene (IPH) has been characterized as a complete, proof based intercession and estimation model for diminishing the bioburden of both patient and human services specialists. IPH parts incorporate hand cleanliness, oral consideration, skincare/antiseptis, and catheter site care. These proof based intercessions can diminish the rate of certain human services procured diseases (HAIs), including Urinary Tract Infections (UTIs). Critical care nurses are confronting difficulties to coordinate intercessions, refined advances and actualize care dependent on current proof, while all the while thinking about the entire individual by tending to the psychosocial challenges and moral clashes related with basic ailment.

**Keywords:** Interventional, Hygiene, Intercessions, rebelliousness

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## Introduction

Most nosocomial contaminations are believed to be transmitted by the hands of social insurance laborers. It has for quite some time been realized that hand cleanliness among so cial insurance laborers assumes a focal job in forestalling the transmission of irresistible operators. Hand washing is the best method for forestalling the spread of irresistible ailments. The reasons of absence of consistence to hand washing include: absence of suitable hardware, low staff to understanding proportions, sensitivities to hand washing items, inadequate information among staff about dangers and systems, the time required and easy going mentalities among HCWs towards bio-security. Hand hygiene is a center component of patient security for the anticipation of Health Care Associated Infection (HAIs) and spread of hostile to microbial obstruction. Its advancement speaks to a test that requires a multi model methodology. Hand cleanliness forestalls cross contamination in emergency clinics, yet Health Care Workers (HCWs) adherence to hand cleanliness rules is poor. Simple, convenient access to both hand cleanliness and skin assurance is important for palatable hand cleanliness conduct. Liquor based hand rub might be better than customary hand washing as they require less time, acts quicker, are less bothering, and add to continued improvement in consistence related with diminished disease rates [1].

The hand cleanliness practices of social insurance laborers (HCWs) have long been the principle vector for nosocomial disease in emergency clinics. So study to analyze effects on hazard judgment from the individual contrasts in information levels what's more, wellbeing convictions among HCWs is significant. Medical clinic obtained diseases groups an undeniable and genuine risk to all who are conceded in medical clinics. Pathogens are promptly transmitted through the hands

of HCWs, and hand cleanliness generously diminishes the opportunity this transmission. Confirm based rules for HCWs, hand cleanliness practice exist, however consistence with these are globally low. Transmission of microorganisms from the hands of HCWs is the principle wellspring of cross disease in emergency clinic and can be forestalled by hand washing. Consistence with hand washing is moderate. Variety across clinic wards and kinds of HCWs recommends that focused instructive program might be valuable. The relationship between rebelliousness and power of care propose that under staffing may diminish the nature of patient consideration. Hand Washing is has a demonstrated advantage in forestalling transmission of disease, yet Consistence with hand washing, particularly in emergency unit significant. Oral hygiene in mechanically ventilated patients is a main problem in intensive care units. Oral procedure such as (ETT) endotracheal tubes and orogastric tubes for keep open mouth, harm salivary flow, and correct the Bacterial natural balance of the oropharynx. Changes in oral flora related to ventilator patient are microbes, They are main reason of changes in normal flora especially in Pneumonia. Changes in bacterial and physical changes, environment of oral flora become pain full and cause disease like xerostomia, fungal infection, mucositis, caries, periodontitis gingivitis. Outcome of mechanical ventilation is tooth loss after long time. Cooperation of the limited patient in oral care, behavioral barriers play main role unconsciousness, at the same the presence of pain, agitation, and delirium. Barriers contributing to insufficient or ineffective application of antimicrobial Pneumonia prophylaxis are reported in 30% of ICU patient. In critically ill patients barrier of the skin care is infection and injury. Giving proper skin care gives impacts skin integrity, it plays important role in infection and pressure ulcers. Giving comforts to the patients in pressure ulcer is main priority for nurses. Nurses are main person to prevent from

pressure ulcer and skin infection. Nurses take care of skin and gives therapeutic effects. In critical care units nurses spend their time intervention to prevent various complication belongs to skin integrity. (Skin Care of Critically Ill Patients, iosrjournals.org.)

In the United States skin injuries/ Pressures ulcers are the main leading escapable error 17 .Pressure ulcer remains minimum 4 days with pain. In hospital-acquired infection pressure ulcer increased. Results of a national survey from 1999 through 2004, due to result of survey the percentage of hospital-acquired pressure ulcer remains constant. ( skin care of critically ill patients iosrjournals.org) The Checklist for the Urinary Catheter Catheterization steps of insertion and ongoing care. The steps of cathetrization Cleaning of the urethral meatus, Sterilization , drainage closed system, perform hand washing, an aseptic technique, and wearing gloves which are used and remove immediately after procedure to protect eyes and face in case of splash The steps of performing hand hygiene, performing catheter hygiene (cleaning catheter site regularly as unit policy), aseptic technique is performing the catheter port. (2017 according to this article a conceptual framework for interventional patient hygiene is given [2].

### **Significance of the study**

Principally the nursing activity plan was centered on the fortifying of patients' host safeguards concerning healthy skin, oral consideration furthermore, the board of self-control, at that point the IPH idea has been extended to hand cleanliness, catheter care and skin antiseptis. The arrangement of cleanliness and of being clean, are the focal point of IPH that ought to have an equivalent need to all other nursing mediations. On the off chance that fundamental nursing care isn't proceeded as suggested, it is essential to distinguish the obstructions that upset attendants from executing it. Fundamental nursing care might be cheapened or missing by slender or on the other hand confined structures that help the significance of essential nursing care, inability to consider medical caretakers responsible or reward/acknowledgment for doing them. This may require changing nursing society with an accentuation on the essentialness of fundamental nursing care [3].

### **Objectives of the study**

The purpose of this study is to investigate knowledge and care practices of nurses for interventional patient hygiene. Specific objectives are:

Do nurses implement interventional patient hygiene (IPH) practices in critical care units?

Do nurses have interventional patient hygiene (IPH) knowledge?

### **Literature Review**

A cross sectional study was carried out by Soussi et al., in 2016 to determine the level of

nurse's practice and knowledge about interventional patient hygiene in critical care units. The

mean percentage nurse's information score is above average than the mean percentage training score in all items (hand hygiene compared with oral care, catheter care and skin care. Barriers for implementing hand hygiene are workload (71.79%), insufficient resources (61.53%), and lack of knowledge (10.25%). The study concluded that the mean percentage IPH knowledge score was higher than the mean percentage IPH practice score of all items. Barriers for executing IPH include workload, inadequate resources, and deprivation of information/training. Andersson et al., conducted a study in 2018 using a mixed-methods design to identify intensive care nurse's opinions of oral care according to conceptual framework and to subsidize to the information base of oral care in critical care units. Concentrated consideration medical caretakers saw that a significant piece of nursing care was oral consideration, particularly to intubated patients. They saw that the nursing staff was capable in oral consideration aptitudes and approached various types of gear and supplies to give oral consideration. The oral cavity was examined every day, for the most part without the utilization of any evaluation instruments. Oral consideration appeared to be task-arranged, and documentation of the patients' encounters of the oral consideration process was uncommon. The study concluded that the forerunners, information, and aptitudes are accessible to give quality oral consideration, yet serious consideration medical caretakers appear to experience issues making an interpretation of these parts into training. In this way they may need to move their errand arranged methodology towards oral consideration to a more individual focused methodology so as to have the option to address patients' issues. In 2011, Trivandrum conducted an observational study to assess the hand hygiene practices among health Care workers in CSICU of SCTIMST TVM. Questionnaire and observation tool were used for data collection among a sample of 100 respondents. The study showed that there was a difference between the knowledge and the practices of hand hygiene among nurses. The overall witnessed acquiescence was 67.08%. The physiotherapist express a higher compliance rate (78%). The study concluded that the overall hand hygiene compliance was 67.08% and the reported study give more than 90% of compliance among HCWs [4].

### **Materials and Methods**

**Study Design:** A descriptive cross-sectional study will be conducted.

**Study Technique:** It will be a Convenience Sampling.

**Study Area and Study Population:** The study population will be carried out at tertiary care hospitals of Lahore, Punjab, Pakistan. All nurses who are working in the selected tertiary care hospitals and involved in a direct contact with patients in critical care units will be invited to participate in this study.

**Sample Size:** Epidemiological information system (EPI) will be utilized to calculate the sample size of the study. A total

number of 150 respondents will be considered to fulfillment of our work.

### **Research Subjects**

**Inclusion Criteria:** Health professionals who work at least 2 months in the direct care of CCU/ICU patients.

**Exclusion Criteria:** Health workers who were extremely ill and on annual leave during data collection were excluded from the study.

**Duration the Study:** 6 months after approval of synopsis.

**Data Collection:** A self-administered questionnaire will be used for the purpose of data collection which contains items related to knowledge and practice of regarding the knowledge and care practices of nurses for interventional patient hygiene. It is divided into the following two sections: Section I - Interventional patient hygiene observational checklist.

Section II - Interventional patient hygiene knowledge questionnaire

**Statistical Analysis:** Statistical package for Social Sciences (SPSS) version 23.0 IBM Corporation Armonk, New York, USA) will be used for data entry and analysis. Initial analysis will be included; computing frequency distribution for categorical variables, mean values ( $\pm$  standard deviation) and median values (with interquartile range [IQR]) to describe the continuous data with and without normal distribution, respectively. Univariate analyses including t-test and chi-square were used to test the significance of results of quantitative and qualitative variables. A significant p-value was considered as 0.05.

### **Ethical Considerations**

The approval for the study will be obtained from the educational authorities of University of Lahore.

The approval for the study will be obtained from the research and ethics committees of the university and the participating hospitals.

Confidentiality, anonymity and privacy of all participants will be guaranteed at all levels of this study.

Written informed consent will also be obtained from each participant.

### **Results**

A total of 150 health professionals were interviewed yielding a response rate of 95% and majorities, 87(58%) were male. More than half of, 79(52.7%) were aged 25 or greater than 25. The mean age of the respondents was 25.25 (SD  $\pm$  4.5) and a higher proportion (50%) of the respondents was bachelor's degree holder and 88% of healthcare worker were staff nurses only 42% of nurses carried out proper hand hygiene actions prevent transmission of microorganisms to the patients. 39% jewellery wearing is associated with increased the risk for colonization of hands with microorganisms. Majority of the respondents

(38%) mentioned that Oral care is important for Proper administration of oral medications followed by the oral care position of supine. Forty two percent respondents agreed that Chlorohexidine is the best solution for oral care followed by Gauze pad. Less than half of the respondents (38%) said that the proper technique used for indwelling urinary catheter insertion is with sterile equipment followed by petroleum jelly is not a risk factor associated for catheter associated urinary tract infection.

### **Discussion**

In this study 150 health professionals were interviewed yielding a response rate of 95% and majorities, 87(58%) were male. More than half of, 79(52.7%) were aged 25 or greater than 25. The mean age of the respondents was 25.25 (SD  $\pm$  4.5) and a higher proportion (50%) of the respondents was bachelor's degree holder and 88% of healthcare worker were staff nurses. Table 2 shows that only 42% of nurses carried out proper hand hygiene actions prevent transmission of microorganisms to the patients. 39% jewellery wearing is associated with increased the risk for colonization of hands with microorganisms. Majority of the respondents (38%) mentioned that Oral care is important for Proper administration of oral medications followed by the oral care position of supine. Forty two percent respondents agreed that Chlorohexidine is the best solution for oral care followed by Gauze pad. Less than half of the respondents (38%) said that the proper technique used for indwelling urinary catheter insertion is with sterile equipment followed by petroleum jelly is not a risk factor associated for catheter associated urinary tract infection [5].

### **Conclusion**

Even though this survey is restricted according to the number of people who respond to these questionnaires, it gives an overview of the new staff health related knowledge, according to this study a questionnaire and observation even effect their knowledge and practice significantly. only 42% of nurses carried out proper hand hygiene actions prevent transmission of microorganisms to the patients. 39% jewellery wearing is associated with increased the risk for colonization of hands with microorganisms. Majority of the respondents (38%) mentioned that Oral care is important for Proper administration of oral medications followed by the oral care position of supine. Forty two percent respondents agreed that Chlorohexidine is the best solution for oral care followed by Gauze pad. Less than half of the respondents (38%) said that the proper technique used for indwelling urinary catheter insertion is with sterile equipment followed by petroleum jelly is not a risk factor associated for catheter associated urinary tract infection. Correspondingly, there is requiring to widening this study to other communities. Furthermore, policies should be applied to enhance health related knowledge in community is suggested.

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