



## A Study On Hand Hygiene Practices Among Health Care Professionals In Critical Care Units

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### ABSTRACT

*Hand washing, a process of decontaminating the hands, has become a major issue in health care settings due to the high incidence of Health care associated infections (HCAs) also known as nosocomial infections. One of the biggest challenges facing infection prevention is health worker's compliance with best practices, especially proper hand hygiene<sup>1</sup>. Most healthcare-associated infections (HAI) are thought to be transmitted by the hands of Healthcare Providers (HCPs) through direct contact, mainly when the hands of Healthcare Providers transfer microorganisms between individuals or between individuals and the environmental reservoir<sup>2</sup>. It has long been known that hand hygiene among Healthcare Providers plays a central role in preventing the transmission of infectious agents. The impact of healthcare-associated infections include prolonged hospital stay, long term disability and increased resistance of micro-organisms to antimicrobials, massive additional financial burden on the patients and families and in some cases, death. The present study was an attempt to assess the hand hygiene practices among the health care professionals in critical care units of private hospital.*

**KEYWORDS :** hygiene practices, health care professionals, critical care units, opportunities

### INTRODUCTION

Infection transmission through contaminated hands of health care workers is a common pattern seeing in most health setting. According to the World Health Organization, the indications for hand hygiene can be merged into five (5) moments during health care delivery<sup>3</sup>. Adequate knowledge and recognition of these moments are the pillars for effective hand hygiene. Therefore, it is possible to prevent health care associated infections by cross transmission via hands if health care providers promptly identify these moments and comply with hand hygiene actions. Failure to perform appropriate hand hygiene practices is a leading cause of health care associated infection and multi resistant organisms and has been recognized as a significant contributor to outbreaks of infectious disease by WHO. It also recognizes that washing hands of healthcare workers with soap can prevent infection in patient and is the most effective and inexpensive way to prevent transmission. Numerous factors could contribute to appropriate hand hygiene practices, it is crucial to understand current behavior of health care workers who contact with high risk patient to develop appropriate, targeted interventions that might improve hand hygiene practices<sup>4</sup>. These factors include the frequency of patient contact by different personnel, frequency of hand washing and gloving, the frequency of contact with the patient's environment and equipment and the impact of different hand hygiene products. Prevalence studies of nosocomial infection in developing countries have reported higher rates than developed countries. Improved compliance with hand washing has been shown to be associated with significant decrease in overall rates of healthcare associated infections and respiratory infections in particular<sup>5</sup>. Therefore hand washing are recommended before and after every patient contact to break the chain of infection. In addition to these, an unfavorable social background and population largely affected by malnutrition and other types of infection and/or disease contribute to the increased risk of healthcare associated infections in developing countries. Hand hygiene is particularly important in the management of critically ill patients within an intensive care unit (ICU). The provision of intensive care includes relatively frequent and close interaction between patients and health-care workers. Meanwhile, colonization of the ICU staff is common; transmission of microorganisms via the hands of health-care workers is universal, and the prevalence of multiresistant organisms. In the ICU is high. Critically ill patients are particularly vulnerable to nosocomial infection as a result of their immune compromised state and multiple invasive catheters<sup>7</sup>.

### MATERIALS AND METHODS

In this study the researcher adopted quantitative approach using a descriptive design. The setting of the study was critical care units of

Private medical college. The samples were the health care professionals who met the inclusion criteria. Sample size comprised of 556 opportunities by using convenient sampling technique.

### TOOLS AND TECHNIQUES

The researcher used two checklists as tool.

#### **Tool I: Structured observational checklist to assess the hand hygiene practices according to risk base. It consists of four parts.**

Part I: High risk procedures

Part II: Medium risk procedures

Part III: Low risk procedures

Part IV: After handling contaminated objects

#### **Tool II: Structured observational check list for hand hygiene consisting two sections**

Section I: Structured observational check list for hand rubbing, which includes eight steps.

Section II: Structured observational check list for hand washing, which includes ten steps.

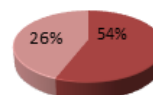
### DATA COLLECTION PROCESS

Data was collected after obtaining formal permission from the ethical committee, management and all the critical care unit head of Private medical college. The nature of the study and the co operation required are explained to the infection control committee and the authority. After obtaining permission, the researcher observed the hand hygiene practices by using check lists of hand rubbing and hand washing techniques respectively. Data was collected over a period of 6 day and night from 11/06/2012 to 16/06/2012.

### RESULTS

#### **1. Distribution of hand hygiene practices among health care professionals: N=283**

Among health care professionals

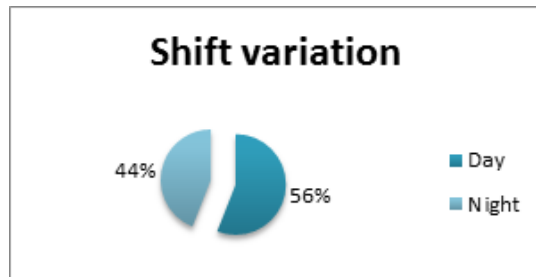


Majority of the subjects who perform hand washing were nurses (74%).

## 2. Hand hygiene practices according to the procedure risk:

Majority of the opportunity (43.47%) are in medium risk.

## 3. Hand hygiene practices in day and night shift:



More than half (56%) of the health care professionals performed hand washing during the day shift.

## DISCUSSION

In the present study, majority (54%) of the health care professionals were nurses who practiced proper hand hygiene and majority of the opportunities (43.47%) were in medium risk procedures and more than half (56%) of the health care professionals performed hand hygiene during the day shift. Almost similar study findings were reported by Timothy A Ekwere, Ifeoma P Okafor (2013), to assess hand hygiene practices among healthcare providers. The findings of the study were a total of 430 health care providers (230 doctors and 200 nurses) participated in this study giving a response rate of 86%. Nurses (69.9%) had better hand washing practices than doctors (Fisher's exact  $p < 0.001$ ) and were more likely to wash their hands before patient contact than doctors ( $p < 0.001$ )<sup>8</sup>. The major motivation for hand washing was fear of contracting disease while the major constraint was busy work schedule in-between patient care. Therefore it can be concluded that Improvement will require concerted multidisciplinary multi method efforts using effective behavior change strategies, led by administrators, ICU leaders, and bedside clinicians, alike.

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