

# The malpractices of hand hygiene in nursing staff



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Hand washing practices are deteriorating day by day at public sector hospitals despite adequate knowledge. This study enlightens an approach to evaluate the knowledge and practice of standard hand hygiene in nursing staff to identify the causes of not adapting hand hygiene techniques during routine patient care work.

#### METHOD:

A cross sectional study was carried out from 15th May to 25th November 2010. A sample of 335 nursing staff was selected and was asked about their practices of hand hygiene through structured questionnaire at five major public sector hospitals of Karachi.

#### RESULTS:

The survey revealed that out of 335 nursing personnel, 71.6% were absolutely unaware of the fact that hand washing for 30 sec to 1 min can minimize the majority of infections, although 74.62% were aware of the fact that when hand washing is necessary to practice. Regarding practice, 35.5% use sanitizers while 47.2% use antiseptic or normal soap for washing hands, 67.8% practice hand washing before & after coming in contact with patients. Only 43.7% took some treatment after needle prick while others having more experience do not feel the necessity to take any treatment. Only 36.1% adopt sterile techniques after hand washing. Surveillance was below average (46.6%). The striking reasons found for poor practices were either lack of knowledge, facilities or intense patient flow. The survey also revealed that as the experience advances, the enthusiasm to work decreases.

**CONCLUSION:**

Hand hygiene knowledge and practice of nursing staff is part & parcel for minimizing infections. So, adequate hand washing facilities, adherence to practice and strict surveillance system for hand hygiene is essential to combat increasing incidence of infections.

**INTRODUCTION:**

Hand hygiene is considered to be the most effective measure to prevent microbial pathogens cross-transmission, healthcare-associated infections and the spread of anti-microbial resistance. The skin on our hands is our first defense against infection from pathogenic organisms. Hands are also the most likely way in which infections or microorganisms spread between people. So washing hands is simply the most effective method of preventing the transmission of infections.

The Centers for Disease Control and Prevention (CDC) and other healthcare-related organizations believe that cleaning hands before and after having contact with patients is one of the most important measures for preventing the spread of infections in healthcare settings.

Hand hygiene is a major component of standard precautions and one of the most effective methods to prevent transmission of pathogens associated with health care.(1) It is considered to be the primary measure to reduce the transmission of nosocomial infections.(2-5) Noncompliance with hand hygiene, however, remains a major problem in tertiary care public sector hospitals in Pakistan.

According to World Health Organization (WHO), the five moments you must remember to wash your hands after;

Before Patient contact

Before aseptic task

After body fluid exposure

After Patient contact

After contact with patient

Health Education is one of the cornerstones for improvement with hand hygiene practices. Health Care Worker education must be promoted at all levels of experience.(6, 7) This study highlights the lacking in practices of standard hand hygiene in nursing staff and their attitude to maintain proper hand hygiene with increasing experience.

## **METHODS:**

**Design & Setting:** A cross sectional study was carried out in Karachi in various public sector hospitals i. e. Jinnah Post-graduate & Medical Centre (JPMC), National Institute of Child Health (NICH), Civil Hospital Karachi, Sindh Institute of Urology & Transplantation (SIUT) and National Institute of Cardiovascular Diseases (NICVD).

The study completed in six months from 15th May to 25th November 2010. The required permission was obtained from the administrators of various departments prior to study.

Nursing staff & Trainees working in the public sector Hospitals, departments of Medicine & Allied, Surgery & Allied, Gynecology & Obstetrics and Pediatrics were included.

A pilot study was carried out in Jinnah Post-graduate Medical Centre (JPMC) to test the applicability and consistency of the tools.

The sampling technique used is convenient sampling and a sample size of 335 has been taken by keeping a population result of 68.8% with 95% confidence interval (95% CI) and 5% margin of error, rest could not be accessible due to non-willingness. P-value of less than 0.05 was considered as statistically significance.

The study protocol was approved by Research Supervisor, Community Medicine Department, Sindh Medical College (DUHS), and an informed consent was taken from the subjects who were personally interviewed through a structured questionnaire.

Nursing personnel working in these hospitals were evaluated according to the World Health Organization (WHO) protocol based on basic concepts of hand hygiene & its parameters.

Data Analysis: The significance of the data was determined by using Statistical Package of Social Sciences software (SPSS, Version 16.0). The results are expressed as frequencies and percentages, cross tabulations, pie charts and bar charts.

**RESULTS:**

Out of 335 individuals, 219 (65.37%) were females and 116 (34.62%) are males including 183 (54.6%) staff nurses & 152 (45.6%) trainees having ages between 16 years to 50 years.

74.62% has sufficient knowledge about the benefits of hand washing while the facilities were available only to 34.3%. Regarding knowledge, 71.6% don't even know that running water for 30 seconds to 1 minute can wash out most of the micro-organisms from their hands leaving only 28.4% with this piece of knowledge.

Regarding practice, 83.3% staff was daily getting exposed to body fluids (blood/urine/CSF/peritoneal fluid etc). 66% of the staff claimed that it is common that they do not practice hand washing due to heavy rush of patients.

Only 34% said that they properly practice hand washing in heavy rush of patients. 56.4% remembered that they had needle prick during their nursing practice at least once & 43.6% couldn't recall or didn't have needle prick. Only 43.7% took some treatment for the needle prick while the rest were satisfied with washing hands with plain water.

78.2% were vaccinated & 72.2% were screened against HBV. 90.4% were having the provision to take sick leave. 35.5% use sanitizers while 47.2% use antiseptic or normal soap. About 90.4% and 83.9% of staff were available with disposable gloves & needles respectively. 85.7% staff has cutter boxes to dispose needles. Surveillance for nursing staff regarding hand hygiene was a mere 46.6%.

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## **DISCUSSION:**

Poor hand hygiene is the main source of infections amongst nursing staff as well as in patients. The study highlights the lack in practice of hand hygiene by nursing staff. World Health Organization has given reviewed results of different studies done worldwide about hand hygiene which showed that the adherence of health care workers to recommended hand hygiene procedure was unacceptably poor with the overall average of about 40 %.(8)

The present study showed that 74. 62% nursing staff knew about the significance of hand washing but the basic knowledge was lacking. For instance, 71. 6% of nursing staff was not aware of the fact that keeping hands under running water for 30 seconds can decontaminate hands to quite an extent. Regarding practice, 67. 1 % washed their hands before and after attending the patient. But many of them didn't use sterile techniques after washing hands. Reason behind malpractice were found to be heavy rush of patients in public sector hospital resulting in low staff to patient ratio and also lack of proper surveillance system. Another contributing factor was experience of the nursing staff as it was traced that as the experience increases, the enthusiasm to work properly decreases. Most of the nursing staff had experienced needle prick out of which less than half had taken some treatment. Figure 1 shows the number of subjects taking treatment after a needle prick compared to advancing experience.

Previously, many studies have been carried-out worldwide regarding hand hygiene amongst nursing staff. In our study it was found that 74. 62% nursing staff had sufficient knowledge but only 66% were practicing it. It also showed that 34. 3% had facilities available for hand washing. A very similar <https://assignbuster.com/the-malpractices-of-hand-hygiene-in-nursing-staff/>

observational study was done locally at a major public sector hospital in Karachi, and it showed that 68.8% had sufficient knowledge about hand washing but 59% were practicing it, while 16.8% were provided with hand washing facilities.(9)

In our study a positive attitude was significantly higher among younger individuals who were working as trainee and about 67.1% decontaminate their hands before and after coming in contact with patients while compliance for invasive procedures was 92.8%. Fig 2 discusses the relationship of knowledge and practice of hand hygiene with experience.

Another study done in Italy showed that hand hygiene practice was significantly higher among the older personnel and in those with the high level of knowledge and 72.5% decontaminate hands before and after patient contact. High compliance is reported for invasive maneuvers (96.5%).(10) Regarding needle prick, our study revealed that only 43.7% took some treatment after needle prick. While a study done in the US showed that a large proportion of respondents did not take any treatment after needle prick.(11)

In our study, 71.6% of the staff did not even know that washing hands under running water for 30 seconds can wash out most of the micro-organisms but a study in Peru showed that mean duration for hand washing following patient contact is 14.5 seconds.(12)

According to our study, the surveillance system was found to be 46.6% while a study in Switzerland showed that compliance improved progressively from 48% in 1994 to 66% in 1997 after implementing proper surveillance

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program, because of same frequency of hand disinfection substantially increased during the study period and overall nosocomial infections decreased from 16.9% in 1994 to 9.9% in 1997. (13)

We also found that 35.5% of staff use sanitizer for hand washing and it was revealed in a study that adherence to hand washing increased significantly since the introduction of waterless hand sanitizers from 73% to 83% before and 80% to 90% after patient contact.(14)

The following are a number of recommendations for improving hand hygiene in nursing staff at government setup hospitals.

1. Informative sessions, trainings should be arranged regularly for nursing staff at government hospitals in order to constantly upgrade their knowledge regarding appropriate hand washing techniques as nurses with more knowledge decontaminate hands more appropriately.(15, 16)
2. A system of proper surveillance should be installed in different wards in order to ensure the compliance to strict hand hygiene techniques.
3. Standard facilities - including wash basins, antiseptics scrubs etc - should be provided at all govt. hospitals to encourage adherence to proper techniques of hand washing.
4. Alcohol rubs should be provided at all wash basins as they are time saving as well as extremely effective.(17)

5. Patient should be made aware of their rights and be encouraged to interrogate the nursing staff regarding hand hygiene techniques adopted at the beginning of every procedure.

6. Different competitions could be arranged for paramedical staff in order to assess their knowledge regarding hand washing.

## **CONCLUSION:**

Hand hygiene, knowledge and practice of nursing staff is part & parcel for minimizing infections among nursing staff as well as in patients they are attending. So, adequate hand washing facilities, adherence to practice and strict surveillance system for hand hygiene is essential to combat increasing incidence of infections. Nursing staff should be highly aware of the consequences of needle prick so proper treatment should be sorted in such a scenario. Upgrading knowledge regarding hand hygiene of nursing staff should be a part of routine.

Increasing experience was associated with decreased practice so a strict and proper surveillance system should be equally implied on every nursing personnel. Provision of health education through TV, print media, seminars & workshops are necessary too.

“ THE HYGIENE WAS THE MOST IMPORTANT THING AS FAR AS KEEPING EVERY ONE HEALTHY.”

-CHRIS LANE-

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