

Handwashing Practices in Health Care Professionals of allied Hospitals of Rawalpindi Medical University

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^{1,2}Conception, Synthesis and Planning of the research, ³Discussion,

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Introduction

Hand washing is simple but a neglected chore. Its importance multiplies when it is addressed under the umbrella of healthcare because hands of health care workers are a tool of providing health to the diseased patients. These hands, can also become a source of transmitting disease. Neglecting hand-washing has occurred as the most frequent reason of such transmission. Semmelweis was the first person who

ABSTRACT

Objective: To assess the practice of hand washing in the teaching hospitals of Rawalpindi Medical University.

Methodology: A descriptive cross sectional study was conducted by on-site observations of HCP regarding hand-hygiene compliance in allied hospitals of Rawalpindi Medical University. Health care professionals having any sort of allergy or sensitivity problem of hands were excluded. A predesigned checklist was used to collect the data. In all the hospitals included in our study, a proper technique, provided by the World Health Organization (WHO), is displayed in almost all the wards.

Results: A total of 218 respondents (74 doctors, 71 medical students and 73 nurses) were observed. Out of these, medical students had best hand-washing practices when compared to that of doctors and nurses. Basic hand-washing facilities were available in all the hospitals but only 36.6% of health-care professionals (10.58% Doctors, 19.58% Medical students, 6.45% nurses) with p value=0.05 practiced hand-washing. Moreover, out of the 36.6%, only 19.22% ($p=0.01$) followed WHO technique of handwashing, whereas, 86.7% of them used antiseptic solution.

Conclusion: Despite the bedside availability of antiseptic solution in all the three hospitals, inadequate compliance was seen in health-care professionals. A multi-disciplinary, multidimensional approach is required to challenge the problems of non-compliance.

Keywords: Hand hygiene, Healthcare professionals, antiseptic solution.

observed that washing hands with antiseptic solution before touching the patient reduced both morbidity and mortality.¹ Pathogenic microorganisms stay on health care professionals' hands for about 2-60 minutes hence become a continuous source of transmitting diseases.² Hand washing serves to be the most efficient way of preventing infections. About 50% of nosocomial infections occur from hands of health care

professionals.³ Despite its documented importance, hand washing compliance remains quite low worldwide and is termed as “unacceptably poor” by a public health authority in London, U.K.⁴ This forced WHO to channelize their efforts in this direction and it launched the First Global Safety Challenge, whose main aim is to achieve an improvement in hand hygiene practices worldwide. This, in return, would help in achieving the goal of a patient as well as doctor safety.⁵ The attitude of health care professionals, unavailability of proper equipment, lack of time due to understaffing, irritation of skin by repeated hand washing, and lack of role models have been identified as the most common barriers towards practicing hand-washing.⁶

A study conducted in Dubti, Northeast Ethiopia revealed poor handwashing practices among health care professionals.⁷ A recent study conducted in Nigeria showed that majority of resident doctors are hand washing technique defaulters.⁸ A research conducted in Nepal revealed that hand washing practices were far better after patient contact than before patient contact.⁹ Hand washing compliance among health care professionals is unacceptably low especially in developing countries.¹⁰ Practices observed among health care professionals of University of Rome concluded that self-reported hand hygiene practices were better nurses as compared to medical students.¹¹

This gross deficiency of hand washing practice despite its paramount importance, coupled with the insufficient medical literature in this domain, makes it the need of the hour to execute research in this context.

The objectives of this study were to assess healthcare workers compliance with the World Health Organization (WHO) prescribed

five moments of hand hygiene & related factors as it relates to patient care and to determine the various strata of healthcare workers of allied hospitals of Rawalpindi Medical University who are in default of such prescribed practices. This will not only generate useful information regarding the prevailing hand washing trends but will also help in devising strategies that can help in inculcating and improving this practice.

Methodology

A cross-sectional observational descriptive study was conducted in teaching hospitals of Rawalpindi Medical University. Subjects were selected through non-probability consecutive sampling. The study setting involved allied hospitals of Rawalpindi Medical University i.e. Holy Family Hospital, Benazir Bhutto Hospital and District Headquarters Hospital. Data was collected during January through March 2018. Health care professionals having any sort of allergy or sensitivity problem of hands were excluded from the study. Sample size was calculated using WHO calculator.

In all the hospitals included in our study, a proper technique, provided by the World Health Organization (WHO), is displayed in almost all the wards.

After approval of the topic from Institutional Research Forum (IRF), a checklist was designed to collect the data about hand washing practices. The checklist involved questions about hand washing practices at personal level, as provided by WHO, and the facilities available in the hospitals. Each ward was visited once to avoid duplication of participants. The data was collected and analyzed using SPSS version 22. Frequencies along with percentages were calculated for all categorical variables. Data was analyzed comparing all variables among doctors, nurses and medical students to

determine if there was any significant difference.

Results

A total of 218 HCW were observed (74 doctors (33.94%), 71 medical students (32.56%) and 73 nurses (33.48%) of Holy Family Hospital, Benazir Bhutto Hospital and District Headquarters Hospital.

The most practiced solution used for hand washing is antiseptic solution i.e., 86.7% as shown in table II.

Table III shows that hand washing facilities are available up to level of each bed i.e., 82.1% of all beds are provided with antiseptic solutions.

Discussion

Hand hygiene is the most important step to prevent transfer of microorganisms in the hospital settings. In October 2005, the WHO, under the slogan of "clean care is safer care", launched a Global Patient Safety Challenge aiming to reduce healthcare associated infections and the spread of anti-microbial resistance. A major component of the challenge is to evaluate, promote and implement hand hygiene in health care.¹² Although hand hygiene is a simple procedure,

Table II: Techniques Used for Hand Washing

		Frequency	%
Valid	plain water	11	5.0
	soap(solid/liquid)	18	8.3
	antiseptic solution	189	86.7
	Total	218	100.0

Table III: Collection of hand washing facilities

		Frequency	Percent
Valid	each bed	179	82.1
	each ward	35	16.1
	Department	4	1.8
	Total	218	100.0

practices of health care professionals in our study have not yet successfully met the current standards set by the World Health Organization (WHO). After a physiological study in hospitals of London and Liverpool, U.K, Bartzokas et al observed that despite frequent engagement with patients, senior doctors washed their hands only twice during 21 hours of ward rounds.¹³ In Nigeria, 69.9% of health professionals practice hand-washing in their health care activities.¹⁴ Our study, on the other hand, shows that hand washing practice among health care professionals in our community is 36.61%. This difference observed in the international and local study is primarily due to workload

Table I: Hand Washing practices among health care professionals

Results of the Study	Doctors (n=74)	Medical student (n=71)	Nurses (n=73)
Those who wash hands in absence of visible dirt	20(9.17%)	61(27.98%)	11(5.05%)
Those who wash hands on presence of visible dirt	72(33.03%)	70(32.11%)	63(28.44%)
Five moments of hand washing provided by WHO:			
1.Those who wash hands before patient contact	2(.92%)	6(8.45%)	00(00%)
2.Those who wash hands after patient contact	23(10.55%)	61(27.98%)	13(5.96%)
3.Those who wash hands before aseptic task	18(8.26%)	54(24.77%)	11(5.05%)
4.Those who wash hands after exposure to body fluids	24(11.01%)	61(27.98%)	13(5.96%)
5.Those who wash hands after contact with patients contact	23(10.55%)	59(27.06%)	12(5.50%)
Those who wash hands after removal of gloves	23(6.55%)	60(27.52%)	12(5.50%)
Those who follow WHO technique of hand washing	14(6.45%)	21(9.68%)	8(3.09%)
Those who dry hands properly after washing hands	11(5.05%)	19(8.72%)	8(3.67%)
Those who use gloves to avoid hand washing	22(10.09%)	15(21.12%)	19(8.72%)

and lack of education and awareness about the importance of hand hygiene practices in our health care professional personnel. Similarly, a study done on hand washing practices in Karachi sculpted that 38.8% of health care professionals practiced hand washing¹⁵, which is nearly equal to our results. This close resemblance of results in both local studies shows that health care professionals of our country face similar issues and problems, so they have approximately similar hand washing practices.

A study from KSA showed that 70% of medical students, 18.8% nurses and 9.1% of senior medical staff adhere to the hand-hygiene regulations¹⁶ while our study reflected with a result of 19.58% for medical students, 6.45% for nurses, and 10.58% for doctors. This clearly shows that our hand washing practices have failed to meet international standards. Another study showed that 30% of hospital health workers washed their hands thoroughly¹⁷ while our study shows that only 19.22% of health care professionals i.e. 6.45% doctors, 9.68% medical students and 3.09% nurses followed the technique of hand washing provided by WHO; reasons being the rush of patients and excessive workload in our hospitals. An earlier studied showed that 8.5% of medical students washed their hands after patient contact while in our study the percentage rises to 27.06%.¹⁸ A study in Saudi Arabia showed compliance of 17% in medical students.¹⁹ A study conducted in India showed that nurses (62.1%) had better hand washing practices than that of medical students (19.6%)²⁰ while our study, on the contrary, showed that medical students (19.58%) had a better practice than nurses (6.4%). This difference is due to more conscious attitude of medical students towards self-care.

Similarly, in Embu country practices were 28% among nurses and 23% among doctors²¹ while our study shows doctors have an adherence of 10.58%. Nurses have better practices than doctors and medical students internationally; however, in our set up results are quite the converse.

WHO has provided five instances during which it is compulsory to wash hands. Despite the clear instructions from the WHO regarding these instances, we have observed a poor response towards hand-washing before contact with the patient, which is solely due to health workers negligence. According to a recent study, 47% of workers wash hands after patient contact²², which come out to be 44.49% in our study. A study conducted in the Royal London showed that only 8.5% of candidates washed hands before patient contact¹⁸ while in our study the result comes out to be 9.37%, and this practice needs to be particularly emphasized on to improve our health issues. A study conducted in Iran showed that more than 35% of health care workers believed in putting on gloves to improve compliance¹, while our study shows that 39.93% of our health care professionals wear gloves.

A watchful assessment of hand washing facilities in our study showed good availability of hand washing facilities, readily available to almost each bed of the three hospitals. According to our study, 82% of beds are provided with basic hand washing facilities. Antiseptic solution is the most easily accessible facility. In our hospitals, even though facilities are there, the commitment of individuals to wash hands is still lacking. A previous study showed that only 16.7% of respondents had access to hand-rubs¹⁵ but, in our study, 95% of respondents had access to the antiseptic situation while the rest were exposed to plain water and soaps.

This clearly elaborates that the fault is at the personal and individual level. Despite having all the facilities, it is the ignorance of health care professionals which is the cause of low hand-washing practices among them.

As the issue lies with the habits of health care professionals, there is need to conduct different awareness programs and workshops about hand washing to educate and emphasize upon the importance of hand-washing and its role in preventing infections among both health care professionals and patients. To reduce nosocomial infections, hand washing must be practiced regularly in both private and public sectors.

It is suggested that such type of a study should be done at a large scale in all public and private setups to ensure good hand-hygiene practices that can serve as a hallmark in reducing hospital-acquired infections in both patients and health care professionals.

Conclusion

Despite bedside availability of antiseptic solution in all the three hospitals, inadequate compliance was seen in health-care professionals. A multi-disciplinary, multidimensional approach is required to challenge problems of non-compliance.

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