

In a Tertiary Care Centre, Health Care Workers Practices about Hand Hygiene.

Usman Ghani Farooqi^{1*}, Fahad Ahmed Khan¹, Anum¹, Sofia Noreen¹, Muhammad Khan Bugti¹, Saqib Shabbir¹

¹ *Baqai Institute of Health Management Sciences, Baqai Medical University, Karachi, Pakistan.*

* Corresponding Author: Dr. Usman Ghani Farooqi, Baqai Institute of Health Management Sciences, Baqai Medical University, Karachi, Pakistan. (dr.usmanfarooqi@gmail.com, +92 345 2977573).

Abstract

About 40% of nosocomial infections are caused by healthcare workers (HCWs) who do not practise proper hand hygiene. These infections cause prolonged illnesses, hospital stays, long-term disability, unexpectedly high costs for patients and their families, and a significant increase in the financial burden on the healthcare system. Health care associated infections are drawing increasing attention from patients, insurers, governments and regulatory bodies. This is not only because of the magnitude of the problem in terms of the associated morbidity, mortality and cost of treatment, but also due to the growing recognition that most of these are preventable. 83% of HCWs had awareness of proper hand washing techniques, and 93% of them agreed that dirty hands are a major source of cross-infection. 79% of respondents reported washing their hands with soap and water and 82% reported using alcohol-based rubs according to WHO standards. Most people preferred washing their hands with soap and water to rubbing their hands with alcohol-based treatments. There is now undisputed evidence that strict adherence to hand hygiene reduces the risk of cross-transmission of infection. With “Clean Care is Safer Care” as a prime agenda of the global initiative of WHO on patient safety programmes, it is time for developing countries to formulate the much needed policies for implementation of basic infection prevention practices in health care set-ups.

Keywords: Health care workers, Hand hygiene, Alcohol rub, Hand washing and Infection.

Introduction

Despite the fact that hand hygiene was recognised as important as early as the 1840s by Dr. Oliver Wendell Holmes to prevent childbed fever and by Dr. Ignaz Semmelweis to lower maternal mortality in a Vienna hospital, adherence rates are still low (at least 40%) in most medical facilities [1,2].

About 40% of nosocomial infections are caused by healthcare workers (HCWs) who don't practise good hand hygiene [3]. The main causes of poor hand hygiene among HCWs are ignorance of and failure to recognise opportunities for hand hygiene during patient care. Despite the fact that many nations have regulations governing hand hygiene in hospital settings, HCW compliance is still generally low [4,5], despite the fact that hand cleanliness is thought to be one of the most crucial components of infection control procedures [6]. Guidelines for particular processes and procedures to be followed during hand washing were released by WHO in 2005 [7]. The spread of illnesses in developing nations continues to be a

severe issue especially in high-risk settings such as health care facilities due to a lack of awareness among healthcare professionals and the "omo syndrome" (a belief that they are super clean and sterile) [8].

The goal of the current study is to explain the degree to which healthcare professionals in a tertiary care hospital are aware of and adhere to hand washing guidelines.

Material and Method

The study design for this research was Quantitative in nature. The quantitative design assists the researcher to identify measureable data. The selected population was the staff of private Hospital of Karachi. 90 people made up the final sample size. However, a sample size of 100 HCWs was examined in total. All HCWs who provided patient care in the tertiary care hospital made up the sampling frame, from which the necessary sample was selected using simple random sampling. The study did not include physicians (interns, residents, specialists, and HCWs) who work in operating rooms because they are a separate group. According to WHO and CDC recommendations and existing studies on hand washing, a questionnaire was created that inquired about a variety of topics, including knowledge of pathogen cross-transmission, recommended hand washing techniques, materials used, attitudes toward hand hygiene, and the presence of facilities in their ward or department. In MS Excel, a database was built, and the necessary statistical analysis was done.

Results

This research brought out this point that 83% Of participants are known of what is hand hygiene (Figure: 1).

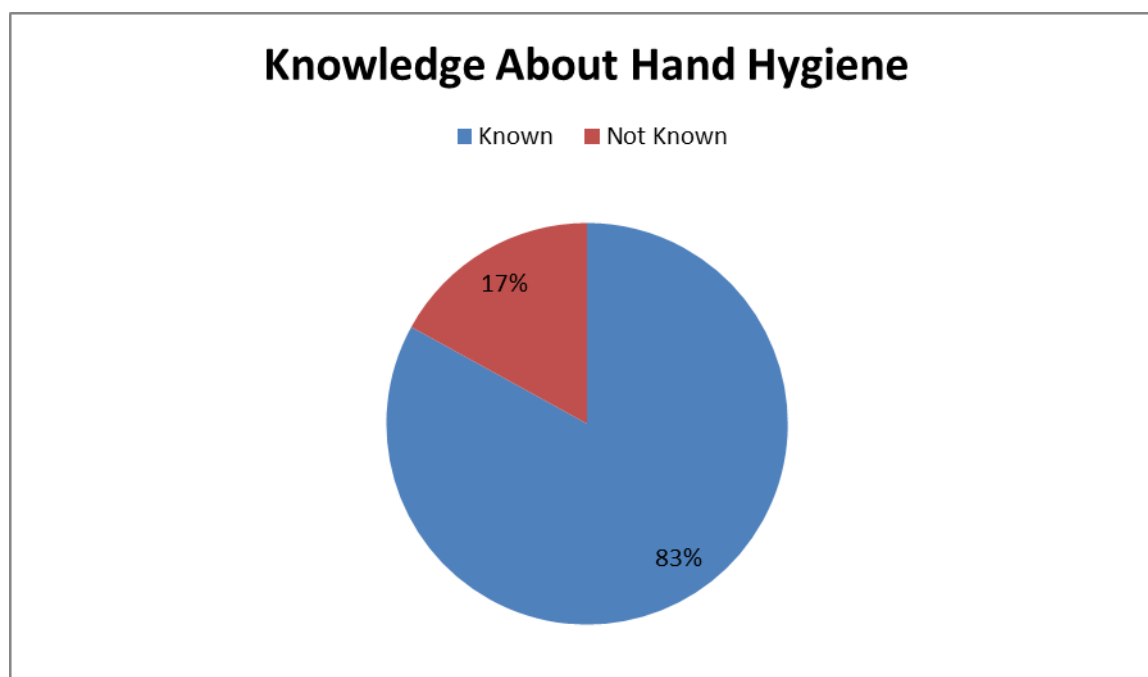


Figure: 1. Knowledge of Hand Hygiene Performance.

The percentage of people who knew that washing their hands before touching a patient would help reduce the spread of germs and that dirty hands were a major source of cross-contamination, respectively, was high (83% and 93%). The findings of the study reveal that 93% of participants knew that why hygiene hand is important (Figure: 2).



Figure: 2. Importance to Performed Hand Hygiene.

Research also disclosed this fact that 82% of participants routinely use an alcohol-based hand rub for hand hygiene (Figure: 3).

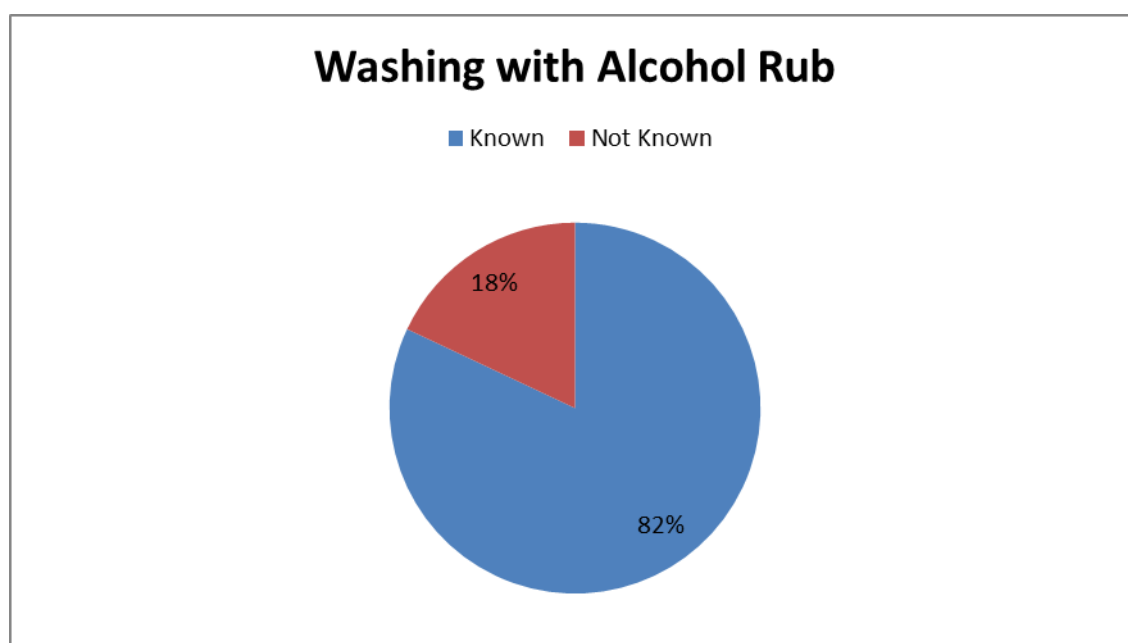


Figure: 3. Importance of Alcohol based Hand Rub.

This study also made it visible that only 7% of participants didn't know when hand hygiene must be performed and 93% participants were aware of when hand hygiene must be performed. In situations like: before giving an injection (79%), after emptying a bed pan (99%), after removing examination gloves (95%), after making a patient's bed (90%) and after visible exposure to blood (99%) (Figure: 4).

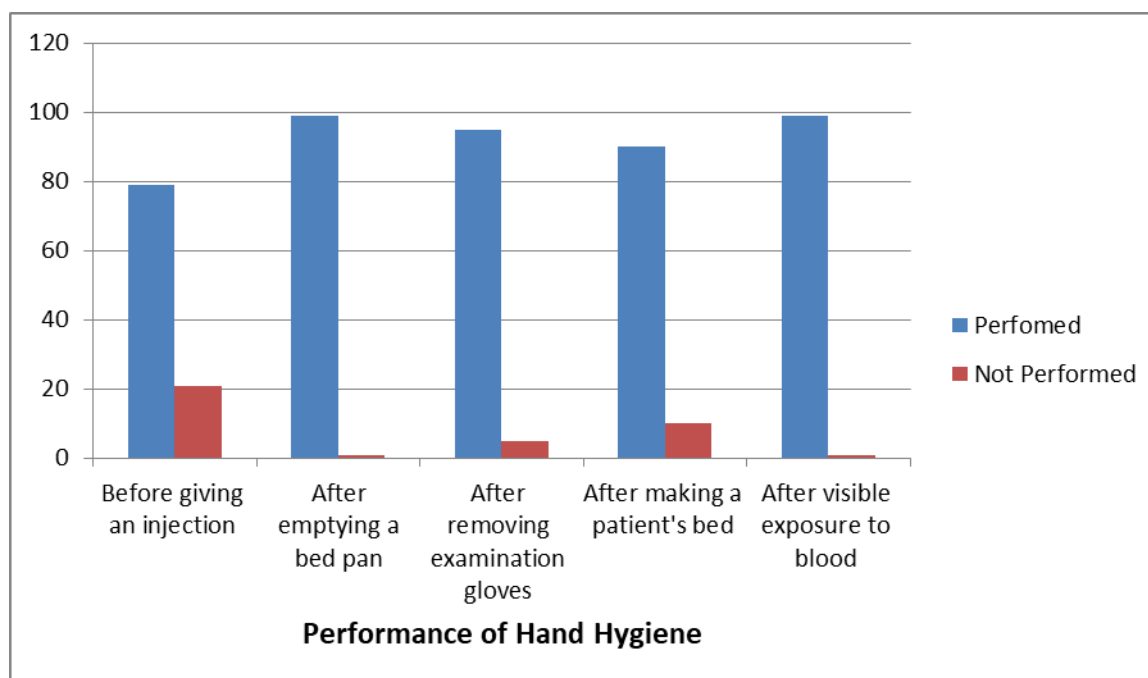


Figure: 4. Situation in which Hand Hygiene Performed.

Discussion

The HCWs in our study preferred hand washing with alcohol based rubs over soap and water. Our study found that among working in tertiary hospitals, compliance with WHO criteria for adequate hand hygiene was higher (82% for alcohol based rubs) over hand washing with soap and water which was 79%. Our study found that 82% of HCWs believed that hand rubbing with alcohol based rubs was faster than hand washing with soap and water and more effective against germs in contrast to survey findings amongst HCWs in the US, who preferred alcohol based solutions over hand washing with aqueous solutions or soap and showed an overall hand hygiene compliance rate of 38.4% with aqueous and 79.4% with alcohols [9]. Overall the attitudes of HCW towards hand hygiene were satisfactory in our study which was comparable to the findings of the earlier studies [10].

To develop successful interventions, more research into behavioral determinants is needed, in particular, how these determinants can be applied to improve hand hygiene. Process indicators are vital and an understanding of why some interventions succeed and others fail is

needed. Since hand hygiene is more behavioral practice, the first step towards the development of interventions should be to identify the prevalence of risk behaviors and difference in risk behaviors. Since the reasons for non-compliance vary among countries, large scale systemic studies are needed to identify the reasons thereof and plan remedial strategies.

Conclusion

Hand hygiene should become an educational priority. Educational interventions for medical students should provide clear evidence that health care workers hands become grossly contaminated with pathogens upon patient contact and that alcohol hand rubs are the easiest and most effective means of decontaminating hands and thereby reducing the rate of Healthcare associated infections (HAIs).

Reference

1. Katz, J.D., 2004. Hand washing and hand disinfection: more than your mother taught you. *Anesthesiology Clinics of North America*, 22(3), pp.457-471.
2. Trampuz, A. and Widmer, A.F., 2004, January. Hand hygiene: a frequently missed lifesaving opportunity during patient care. In *Mayo clinic proceedings* (Vol. 79, No. 1, pp. 109-116). Elsevier.
3. Inweregbu, K., Dave, J. and Pittard, A., 2005. Nosocomial infections. *Continuing Education in Anaesthesia, Critical Care & Pain*, 5(1), pp.14-17.
4. Wendt, C., 2001. Hand hygiene—comparison of international recommendations. *Journal of hospital infection*, 48, pp.S23-S28.
5. Suchitra, J.B. and Lakshmidevi, N., 2006. Hand washing compliance—is it a reality. *Online J Health Allied Scs*, 4(2).
6. Mathur, P., 2011. Hand hygiene: back to the basics of infection control. *The Indian journal of medical research*, 134(5), p.611.
7. WHO guidelines on hand hygiene in health care: A summary, 2005. Available at: www.who.int/patient_safety/events/05/HH_en.pdf. Accessed in Jan 2010.
8. Saloojee, H. and Steenhoff, A., 2001. The health professional's role in preventing nosocomial infections. *Postgraduate medical journal*, 77(903), pp.16-19.
9. De Wandel, D., Maes, L., Labeau, S., Vereecken, C. and Blot, S., 2010. Behavioral determinants of hand hygiene compliance in intensive care units. *American Journal of Critical Care*, 19(3), pp.230-239.
10. Hosseinialhashemi, M., Kermani, F.S., Palenik, C.J., Pourasghari, H. and Askarian, M., 2015. Knowledge, attitudes, and practices of health care personnel concerning hand hygiene in Shiraz University of Medical Sciences hospitals, 2013-2014. *American journal of infection control*, 43(9), pp.1009-1011.