

ASSESSMENT OF KNOWLEDGE AND COMPLIANCE ON HAND HYGIENE AMONG HEALTH CARE TEAM IN TERTIARY CARE CENTRE

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ABSTRACT

Objective: To assess the knowledge and compliance of hand hygiene standards and guidelines among healthcare workers in a hospital.

Study Design: Cross-sectional Study.

Place and Duration of Study: This study was conducted in Armed Forces Institute of Cardiology/National Institute of Heart Diseases, from Oct to Dec 2018.

Material and Methods: Total 102 health care workers were recruited through non-probability sampling technique. A validated research tool (WHO) was introduced and which consist of 18 structured questionnaires to assess knowledge and observation checklist to assess compliance on hand hygiene. Likert scale was used to answer the questionnaire. The collected data was entered and analyzed on SPSS (version 23).

Results: Our results show that out of 102 participants, 43 (42.2%) were familiar with the hand hygiene guidelines, whereas for 77 (75.5%) of the participants, the guidelines were readily accessible. The developer of the guideline is well qualified and knowledgeable about hand hygiene (42.2%). 61.8% of health care workers were agreed that the aim of these guidelines is to provide specific recommendations for improving clinical practices and reducing the transmission of pathogenic microorganisms to patients. Total of 47 (46.1%) health care workers were agreed that the questionnaire was related to infection control policies and based on scientific research. 56.9% of the health care workers were not willing to change their hand hygiene regime, 69.6% were following traditional method and some of them contradict with these guidelines (66.7%).

Conclusion: Emphasis on hand hygiene training programs in medical staff is an important issue that should be considered more seriously by the health policy makers.

Keywords: Compliance, Hand hygiene, Health Care Worker, Knowledge.

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INTRODUCTION

Globally, thousands of people die every day due to infections acquired through health care procedures. Transmission of germs during health care primarily occurs through contaminated hands^{1,2}. One of efforts towards high compliance is the introduction of an evidence-based concept of "My five moments for hand hygiene" by World Health Organization. These five moments that call for the use of hand hygiene include the moment before touching a patient, before performing aseptic and clean procedures, after being at risk of exposure to body fluids, after

touching a patient, and after touching patient surroundings³. Practicing hand hygiene, either washing the hands with water and soap or using alcohol-based hand rub, is a simple effective way to prevent infections⁴. Any healthcare worker, who is involved in patient care directly or indirectly, should be aware of hand hygiene importance and also be able to carry out hand hygiene properly⁵. Although hand hygiene procedures are relatively simple, studies have shown that the compliance among healthcare workers is not favorable. Several barriers to compliance with hand hygiene have been explained include lack of education, lack of persuasion, high work load, working status and not being aware of implementation guidelines^{7,9}.

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Infection control practices in Pakistan need improvement and better implementation, as many public sector hospitals don't follow proper hand hygiene guidelines⁶. There have been a number of studies which have evaluated the knowledge regarding hand hygiene practices in Pakistan, with a majority having poor to moderate knowledge. Representing a knowledge gap in Pakistani health care works.

Based on this study, training programs did not affect the participants' knowledge.

at Armed Forces Institute of Cardiology and National Institute of heart diseases from October to December 2018. This hospital has specific infection control policies and also provides and hygiene training for staff.

Study Participants

All employed health care workers of all ages and gender, who were willing to participate in our study, were included. Verbal consent was obtained and selected 102 health care workers were asked to fill the designed questionnaire.

Table: Frequency and percentage distribution of Health care workers according to socio-demographic variables (n=102).

| S. No | Variables | n (%) |
|----------|-------------------|------------|
| 1 | Gender | |
| | Male | 56 (54.9%) |
| | Female | 46 (45.1%) |
| 2 | Job title | |
| | Resident | 4 (4%) |
| | AFNS | 28 (27.5%) |
| | Nursing Assistant | 35 (34.3%) |
| | Aya | 11 (10.8%) |
| | Holter technician | 1 (1%) |
| | Sanitary worker | 16 (15.7%) |
| Ward boy | 7 (6.9%) | |
| 3 | Education | |
| | <Matric | 13 (12.8%) |
| | Matric | 23 (22.5%) |
| | FA/FSc | 32 (31.4%) |
| | BA/BSc | 30 (29.4%) |
| | MBBS | 4 (3.9%) |

Considering that the first and the most important part of controlling nosocomial infections acquired through poor hand hygiene, is raising the level of Health care workers' knowledge and also because of scant attention to this issue in our region, identifying the knowledge regarding hand hygiene practices can be helpful⁸. The aim of this study was to determine the knowledge regarding hand hygiene practices amongst healthcare workers and to identify the areas of gaps in their knowledge.

MATERIAL AND METHODS

Research Design and Setting

After approval from ethical review board, descriptive cross-sectional study was conducted

Data Collection

For collecting data, the World Health Organization (WHO) "Hand Hygiene Knowledge Questionnaire"- revised 2009 edition was used. A semi-structured questionnaire was developed and used as an assessment tool to evaluate the knowledge of staff regarding hand hygiene. It was distributed and collected from staff of all the departments of hospital.

Performa was consisted of 18 questions associated with assessing knowledge and compliance on practices of hand hygiene guidelines. Likert scale was used to answer the questionnaire and for convenience Performa was designed into both English and Urdu languages.

Statistical Analysis

Data was entered into statistical analysis software (IBM SPSS version 23.0). Results of categorical data were presented as frequency and percentages.

RESULTS

There were total of 102 participants in our study regarding hand hygiene out of which 56 (54.9%) were males and 46 (45.1%) were females.

Our results show that out of 102 participants, 43 (42.2%) were familiar with the hand hygiene guidelines, whereas for 77 (75.5%) of the participants, the guidelines were readily accessible.

About 67 (65.7%) participants strongly

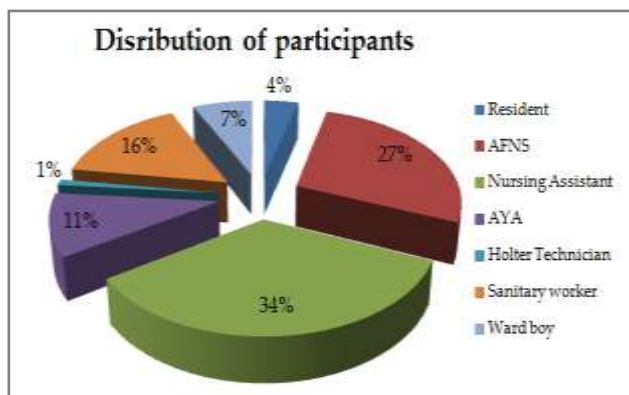


Figure: Percentage of Health care workers.

agreed that if they follow the recommendations of the guidelines in our practice setting, infection rate will be decreased.

Out of 102 participants, 58 (59%) of the health care workers do not complain any dried skin problems if they followed the recommendations of the guideline. The developer of the guideline is well qualified and knowledgeable about hand hygiene (42.2%). 61.8% of health care workers were agreed that the aim of these guidelines is to provide specific recommendations for improving clinical practices and reducing the transmission of pathogenic microorganisms to patients. Total of 47 (46.1%) health care workers were agreed that the questionnaire was related to infection control

policies and based on scientific research. Moreover, in order to produce sound research, investigation was patient-centered and aimed to evaluate the accuracy of diagnostic tests and the effectiveness and safety of therapies and of preventive practices. There may be some potential barriers in following the recommendations but only 50 (49%) health care workers were agreed that practical issues can be overcome to follow these guidelines. 56.9% of the health care workers were not willing to change their hand hygiene regime, 69.6% were following traditional method and some of them contradict with these guidelines (66.7%). Out of total 102 participants, 67 (65.7%) and 59 (57.8%) were agreed to practice these guidelines in terms of time consumption and liable for practice respectively.

DISCUSSION

Hand hygiene is an important aspect of healthcare and is the first step in preventive medicine. Our study reflected that even though the majority of healthcare workers were following hand hygiene the majority 59 (57.8%) of the population was unaware of the guidelines even though the majority agreed that following these guidelines will help in infection rate control. The study thus help us identify a gap between the knowledge and practices at our hospital setting and helps in identifying the factors that affect such a high number of healthcare providers. It can be used as a basis to start annual informative sessions that will help better equip the hospital staff in the future regarding hand hygiene practices and infectious control. The study also shows that the hospital staff needs to be educated on the practical and cost effective benefits of hand hygiene as only half of the population was aware of them. A positive aspect of the results was that a large number of healthcare workers agreed that these practices were not time consuming, however the majority also agreed that they were comfortable with their current practices and would not like to change them which again reinforces the need for further hand hygiene education among the health

care workers. The questionnaire was able to access the guidelines effectively which showed its validity.

Compared to the study by Zakeri *et al* which had only 10.6% of the participants with good knowledge we had a much higher number of participants aware of the current hand hygiene guidelines (42.2%). Their study also had higher number of participants complaining of dryness due to hand washing which may be due to differences in hand sanitizers in the hospitals. A similar study by Rao *et al* including multiple center showed that 75% had access to hand hygiene supplies whereas in our study it was 77%. Over all our study help in establishing future guidelines for AFIC which will help improve infectious control.

CONCLUSION

Our study highlights the importance of applying the training program addressing providers' knowledge, attitudes, and beliefs regarding hand hygiene, as well as strategies for behavioral change such as patient engagement in hand-hygiene interventions. Emphasis on hand hygiene training programs in medical staff is another important issue that should be considered more seriously by the health policy makers. Future studies should focus on new strategies which can influence the knowledge level of health care workers and also their compliance.

CONFLICT OF INTEREST

This study has no conflict of interest to be declared by any author.

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