



AWARENESS OF HAND HYGIENE PRACTICES AMONG NURSES IN A TERTIARY CARE CENTER – A PILOT STUDY

Microbiology

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ABSTRACT

Objectives: Hospital acquired infection (HAI's) contributes to the major burden in the health care system. Most of the nosocomial infections were thought to be transmitted by the hands of the health care worker. The majority of the HAI's can be prevented by the major precautionary measure that is hand hygiene.. Hand hygiene practices prevents the cross transmission of infections between patients and also it reduces the incidence of health care associated infections.Lack of awareness and knowledge among health care workers regarding the importance, techniques, methods and quality of hand hygiene increases the risk of cross transmission of diseases. This study is aimed at assessing the knowledge about hand hygiene among nurses in a tertiary care hospital.

Materials & Methods: This cross-sectional study was conducted among nurses working at Government Medical College & Hospital, a tertiary care hospital in Chennai. After taking informed consent, 50 nurses were selected by random sampling who volunteered to participate in the study were evaluated based on structured questionnaire. The nurses who were not willing to participate in the study were excluded. Knowledge on hand hygiene before and after training was evaluated using WHO hand hygiene questionnaire for health care workers and analyzed using percentages.

Results: Before training, a pre test was conducted among the nurses which showed about 50% of knowledge about hand hygiene practices. After training, post test was conducted which showed an increase of 80% knowledge about hand hygiene practices.

Conclusion: Knowledge on hand hygiene before training was very poor but it was much better after training session among the nurses. a simple training session can significantly improve the knowledge about hand hygiene among nurses. Hence continual training session has to be conducted among the nurses to reduce the risk of acquiring nosocomial infections.

KEYWORDS

hand hygiene, nosocomial infections, nurses, knowledge.

INTRODUCTION

Hospital acquired infection (HAI's) contributes to be the major burden in the health care system. Most of the nosocomial infections were thought to be transmitted by the hands of the health care worker. The majority of the HAI's can be prevented by the major precautionary measure that is hand hygiene. Hand hygiene practices prevents the cross transmission of infections between patients and also it reduces the incidence of health care associated infections. Though the hand hygiene procedure is simple and of at most importance in preventing the HAI's its compliance among health care workers is as low as 40%(1). Factors that contribute to non-compliance are lack of awareness and knowledge among health care workers regarding the importance, techniques, methods and quality of hand hygiene. And human tendencies that lead to low compliance are busyness, forgetfulness, low staff to patient ratio and attitudes among staff towards bio-safety(2). There has to be an effective and sustainable strategy to improve the compliance of hand hygiene.

The concept of "My five moments for hand hygiene" by World Health Organization has helped to a great extent to improve the compliance. According to WHO these are the five moments during which the hand hygiene has to be followed, 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 surroundings. These five moments of hand hygiene was very effective in understanding, monitoring, reporting and training of health care workers(3).

AIM

Hand hygiene is very important in preventing the transmission of infection between patients and among the health care workers nurses play a vital role in patient care. This study is aimed at assessing the knowledge about hand hygiene among nurses in a tertiary care hospital.

MATERIALS AND METHODS

This is a cross-sectional study conducted among nurses working at Government Medical College & Hospital, a tertiary care hospital in Chennai. After taking informed consent, 50 nurses were selected by random sampling who volunteered to participate in the study were

evaluated based on structured questionnaire. The nurses who were not willing to participate in the study were excluded. Knowledge on hand hygiene before and after training was evaluated using WHO hand hygiene questionnaire for health care workers and analyzed using percentages.

WHO "Hand Hygiene Knowledge Questionnaire for Health-Care Workers"

Sl.no.	QUESTIONS (Answers)
1	Did you receive formal training in hand hygiene in the last three years?
2	Do you routinely use an alcohol-based hand rub for hand hygiene?
3	Which of the following is the main route of transmission of potentially harmful germs between patients? (health care workers hands when not clean)
4	What is the most frequent source of germs responsible for health care associated infections? (germs already present on or within the patient)
5	Before touching a patient (yes)
6	Immediately after risk of body fluid exposure (yes)
7	After exposure to immediate surroundings of a patient (no)
8	Immediately before a clean/aseptic procedure (yes)
9	Which of the following hand hygiene actions prevents transmission of germs to the health care worker?
10	After touching a patient (yes)
11	Immediately after a risk of body fluid exposure (yes)
12	Immediately before a clean/aseptic procedure (no)
13	After exposure to the immediate surroundings of a patient (yes)
14	Which of the following statements on alcohol-based hand rub and hand washing with soap and water is true?
15	Hand rubbing is more rapid for hand cleansing than hand washing (true)
16	Hand rubbing causes skin dryness more than hand washing (false)
17	Hand rubbing is more effective against germs than hand washing (false)

18	Hand washing and hand rubbing are recommended to be performed in sequence (false)
19	What is the minimal time needed for alcohol-based hand rub to kill most germs on your hands? (20 seconds)
20	Which type of hand hygiene method is required in the following situations?
21	Before palpation of the abdomen (rubbing)
22	Before giving an injection (rubbing)
23	After emptying a bed pan (washing)
24	After removing examination gloves (rubbing/washing)
25	After making a patient's bed (rubbing)
26	After visible exposure to blood (washing)
27	Which of the following should be avoided, as associated with increased likelihood of colonization of hands with harmful germs?
28	Wearing jewelry (yes)
29	Damaged skin (yes)
30	Artificial fingernails (yes)
31	Regular use of a hand cream (no)

For each participant the above questionnaire was given and for every correct response one mark was awarded and the percentage of marks obtained by each participant is calculated. The knowledge about hand hygiene was assessed based on the percentage of marks obtained by each candidate. A score of 1 was given for every correct response. A score of >75%-good, 50-74%-moderate, <50%-poor. Data analysis was done using SPSS software.

RESULTS

Table no 1 & figure no 1 in appendix A showed that before the hand hygiene training session the knowledge about hand hygiene among nurses was assessed by conducting a pre-test and it was found that the 50% of the nurses had adequate knowledge about hand hygiene. After the training session their knowledge was assessed by conducting the post-test and it improved from 50% to >80%. It indicates that the effective training has improved the knowledge and awareness about hand hygiene among nurses.

DISCUSSION

Hand hygiene prevents the cross transmission of infection between patients in hospitals, but, adherence to guidelines or protocol is poor among health care workers(4). Even though the technique involved in hand hygiene is very simple, there are lot of interdependent factors which determine the hand hygiene behavior makes the study of hand hygiene more complex(2). This study shows that the training session on hand hygiene has improved the knowledge as well as to some extent the compliance among health care workers which correlates with the study done by Sjöberg et al that also states that a single lecture on hand hygiene has produced significant and sustained improvement in the compliance among health care workers in Swedish hospital(5). Another study done by Trampuz et al also states that a simple training session for health care workers will make significant improvement in hand hygiene practices (6).

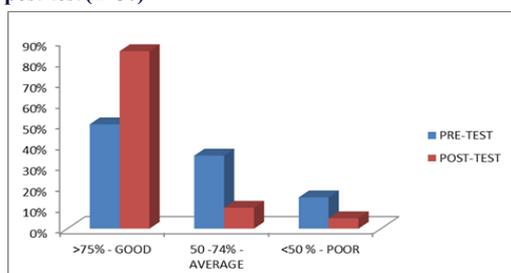
CONCLUSION

Our study shows that a simple training session can significantly improve the knowledge about hand hygiene among nurses. Training sessions should be conducted at regular intervals to get consistent and sustained improvement in the knowledge as well as to some extent compliance among health care workers.

Table No 1 :Percentage of marks obtained by nurses(n=50) participated in the study

TEST	>75% - GOOD	50 -74% - AVERAGE	<50 % - POOR
PRE-TEST	50%	35%	15%
POST-TEST	85%	10%	5%

Figure 1 : Bar diagram showing % of marks obtained in pre-test and post-test (n=50)



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