



EFFECT OF INTERVENTION PROGRAM ON KNOWLEDGE OF INDIAN MEDICAL STUDENTS ABOUT THE HAND HYGIENE

Sonika Sangra

KEYWORDS :

INTRODUCTION

One of the measures of personal hygiene is hand hygiene which is important from many generations. It prevents the transmission of micro-organisms and results in the reduction of cases of healthcare associated infections.² Despite of simplicity of hand hygiene recommendations, the compliance rate is still not upto mark. In developing countries, prevalence of hand hygiene associated infections is 19%.³ Because of low compliance rate, continuous efforts being made to improve the strategies and also to identify it. So, the WHO introduced a new concept "My five Moments for hand Hygiene" to address the problem. These moments helped in training as well as monitoring the hand hygiene practices.

Medical students play an important role in delivering health care services in the hospital. So, the assessment of their knowledge and practice regarding hand hygiene is important as the students will become the future physicians. The Medical students become the role models of the community as well.

MATERIAL AND METHODOLOGY

This pre-post interventional observational study was conducted in the undergraduate students of Government Medical College, Kathua, J&K after obtaining ethical clearance from Institutional Ethical Committee. Consent was also obtained from 99 undergraduate medical students prior to the study. It is a pre and post intervention study in 99 undergraduate medical students for a period of one month. WHO standardized Questionnaire and My 5 moments of hand hygiene Questionnaire was used as study tool.

The study phases consist of 3 phases-
1st phase consist of pre-intervention assessment of knowledge and compliance among medical students.

2nd phase-intervention with activities to improve the knowledge about the hand hygiene practices and

3rd phase comprises of post-intervention assessment of students. Data was entered in Microsoft excel. Descriptive statistical analysis will be expressed in form of number, percentages .

RESULTS

Only 20% of the students received formal training in hand hygiene methods in the last 3 years. Maximum knowledge items showed the positive improvement after post- intervention especially those regarding Main route of cross-transmission, after exposure to the immediate surroundings of the patient, minimum time needed for alcohol based hand rub.

Table 1. WHO Hand Hygiene Knowledge Questionnaire for Health-Care Workers with answers.

S. No.	Questions	Pre-intervention N (%)	Post-intervention N (%)
1.	Participants who received Formal Training in Hand Hygiene in the last 3 years.	20(20.20%)	99(100%)
2.	Routinely used alcohol based hand rub	73(73.73%)	90(90.90%)
3.	Main route of Cross-transmission of Potentially harmful germs between patients in a health care facility .	40(40.40%)	96(96.96%)
4.	The most frequent source of the germs responsible for health care-associated infections. .	83(83.83%)	96(96.96%)

5.	Hand hygiene actions prevent transmission of germs to the patient. a) Before touching a patient b) Immediately after a risk of body fluid exposure c) After exposure to the immediate surroundings of a patient d) Immediately before a clean/aseptic procedure	48(48.48%) 61(61.61%) 59(59.59%) 81(81.81%)	86(86.86%) 89(89.89%) 92(92.92%) 99(99.99%)
6.	Hand hygiene actions prevents transmission of germs to the health-care worker. a) After touching a patient b) Immediately after a risk of body fluid exposure c) Immediately before a clean/aseptic procedure d) After exposure to the immediate surroundings of a patient	80(80.80%) 59(59.59%) 52(52.52%) 45(45.45%)	99(99.99%) 95(95.95%) 93(93.93%) 94(94.94%)
7.	Which of the following statements on alcohol-base handrub and hand-washing with soap and water are true? • Handrubbing is more rapid for hand cleansing than handwashing True False • Handrubbing causes skin dryness more than handwashing True False • Handrubbing is more effective against germs than handwashing True False • Handwashing and handrubbing are recommended to be performed in sequence	78(78.78%) 51(51.51%) 72(72.72%) 57(57.57%)	82(82.82%) 90(90.90%) 97(97.97%) 81(81.81%)
8.	What is the minimal time needed for alcohol-based handrub to kill most germs on your hands?	57(57.57%)	89(89.89%)
9.	Which type of hand hygiene method is required in the following situations? a) Before palpation of the abdomen* * b) Before giving an injection* c) After emptying a bedpan* d) After removing examination gloves* e) After making a patient's bed* * f) After visible exposure to blood*	84(84.84%) 61(61.61%) 48(48.48%) 52(52.52%) 79(79.79%) 64(64.64%)	98(98.98%) 95(95.95%) 91(91.91%) 94(94.94%) 89(89.89%) 99(100%)
10.	Which of the following should be avoided, as associated with increased likelihood of colonisation of hands with harmful germs? • Wearing jewellery* • Damaged skin* * • Artificial fingernails.* • Regular use of a hand cream*	59(59.59%) 88(88.88%) 33(33.33%) 60(60.60%)	82(82.82%) 98(98.98%) 83(83.83%) 87(87.87%)

* Statistically significant **Not Statistically significant (P value)

Table 2. Knowledge and Practice of WHO's My Five Moments of Hand Hygiene.(N=99)

Moments of Hand Hygiene		Knowledge		Practice	
		Pre-intervention	Post-intervention	Pre-intervention	Post-intervention
Moment 1	Before Patient Contact.	48(48.48%)	86(86.86%)	45(45.45%)	85(85.85%)
Moment 2	Before an aseptic task.	81(81.81%)	99(99.99%)	76(76.76%)	95(95.95%)
Moment 3	After Body fluid exposure risk.	59(59.59%)	95(95.95%)	56(56.56%)	93(93.93%)
Moment 4	After patient contact.	80(80.80%)	99(100%)	77(77.77%)	99(100%)
Moment 5	After contact with patient Surroundings.	45(45.45%)	94(94.94%)	44(44.44%)	93(93.93%)

DISCUSSION

Medical students frequently come into close contact with patients and their surroundings during routine patient care.⁴Hand Hygiene method is most essential method to reduce the hospital associated infections. Among medical students, the compliance of hand hygiene can increase by simple demonstration.⁵Our study results showed positive effect on the knowledge and practice responses after short course of intervention.

The hand hygiene method should always become an educational priority as suggested by Rykkje L.⁶As educational interventions for medical students are very necessary because it provide clear evidence that upon patient contact, their hands become grossly contaminated with pathogens. Also provide information that the alcohol based hand-rubs are the easiest method for decontaminating the pathogens in a short span of time after patient contact. One more study done by Pittet which showed improvement in hand hygiene compliance using a multi modal strategy.⁷We emphasis more on imparting hand hygiene knowledge to our undergraduate medical students before start of their clinical postings.

CONCLUSIONS

Continuous monitoring of the hand hygiene compliance is necessary. Proper formal training of the students as well as hospital staff is necessary at regular intervals and the feedback of the performance will encouraged them to follow the methods of hand hygiene.

Conflict of interest- None**Funding-** None**REFERENCES**

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