

Study of Hand Hygiene in Attendants Visiting Hospital

Aradhai Bana

Student, Jayshree Periwal International School, Jaipur, Rajasthan, India

ABSTRACT

Hand hygiene is an important process to limit the spread of infection and reduce the burden of infectious diseases in community. At present, the practice of hand hygiene as an integral part of day to day life is lacking. In this study, hand swab samples were taken from 50 persons in an urban hospital lobby as visitors after taking written informed consent. Out of 50 hand swab samples, 15 (30%) were positive for bacteria. This study gives alarming information that even those people who are visiting hospitals are not practicing good hand hygiene. After asking question about importance of hand hygiene, only 44% of persons were aware and none of them have got any formal information at community level about hand hygiene. Community based educational program on importance of hand hygiene and how to do hand wash will definitely prove beneficial. Schools are another important platform to start hand hygiene awareness program which will indirectly benefit the society at large.

INTRODUCTION

Contaminated hands play a big part in transmission of illness. Hand washing has been on common practice since the Roman times, yet throughout history its role in the control of infection has been, and still remains, often ignored. It was not until 1847 that hand washing was proved to be effective in preventing infection by a Hungarian doctor, Dr Ignatz Semmelweis. He found that 'child bed' (or puerperal) fever could be transmitted through poor hand hygiene and that good hand washing practice amongst medical staff helped limit infection.¹ Public health importance of hand washing as well as its importance in reduction of communicable diseases such as diarrhea and sudden serious lung infections have been highlighted in many studies worldwide.²

Hand hygiene at home, school, and within our

communities play an extremely important role in reducing the spread of infectious diseases that can spread from one person to another. However, there has been a steady decline in the promotion of hygiene practices in modern homes, mainly due to changing family demands and structure.³ Children are usually taught to wash their hands when they are young, but these efforts by parents often decrease when children reach school.⁴ Infectious diseases result in an estimated 13 million deaths annually. Hand washing with soap has been viewed as one of the most cost-effective ways of reducing the global infectious disease burden.⁵

Every year, 15th October is celebrated as Global Hand Washing Day. Global Hand Washing Day was originally created for children and schools, but can be celebrated by anyone who promotes hand washing with soap. The practice of good hand washing needs water, soap, and ideally clean hand drying facilities. Furthermore, the importance of hand hygiene should be promoted and people should be encouraged to wash hands after using the toilet, handling food, changing a child's nappy, touching animals, and before eating. A recent study in the American Journal of Infection Control looked at the impact of poor hand hygiene by college students.⁶ Specifically, the study linked poor hand hygiene practices to increased occurrences of infectious diseases, medical visits and absence from class and work. Students living in college and university campuses have a high risk for the spread of infectious diseases, as they live in close proximity, are exposed to both environmental and indoor pathogens, and often travel in campus and within their communities. Studies regarding hand hygiene in different parts of community need to be undertaken. This study was aimed at assessing the hand hygiene status of healthy people coming to an urban hospital as patient visitors or attendants.

METHODS

After systematic random sampling, hand swab samples were taken by infection control nurse, from 50 persons, present in an urban hospital lobby as a visitor after taking informed written consent. These samples were sent to microbiology laboratory to find out the presence of any microorganism growth. The samples were processed in blood agar (for gram positive bacteria), MacConkey agar (for gram negative bacteria) in glucose broth, then incubated at 37°C for 24 hours. After 24 hours the samples in which growth was detected were further processed in automated Vitek-2 machine for their identification. For data analysis purpose, samples were divided in two groups according to the residential place of a person urban and rural. At the time of sample collection, the data were collected on a pretested predesigned questionnaire about sociodemographic details and interview details which included awareness of hand hygiene and from where they got the information or training.

RESULTS

Out of 50 hand swab samples, 15 (30%) were positive for bacteria. The microbiological assessment showed that 11 (22%) people were having harmful bacteria and four (8%) were having harmless bacteria (Table 1). Out of 15 positive people, 8 (53.3%) were from rural background and 7 (46.7%) from urban area. 22 people (44%) were aware of importance of hand hygiene and its relation to disease transmission and out of them 16 (73%) were from urban area (Figure 1). Only 6 people told that they have some formal information about importance of hand hygiene and all of them were from urban area. Three people received this information when they were in school and rest 3 got hand hygiene information either by television or at their work place.

Table 1: Microbiological assessment of hand swabs (N = 50)

Type of bacteria	Numbers (%)
Harmful bacteria	
<i>Escherichia coli</i>	7 (14%)
<i>Staphylococcus aureus</i>	4 (8%)
Harmless bacteria	
<i>Staphylococcus epidermidis</i>	2 (4%)
Coagulase negative Staphylococcus	2 (4%)

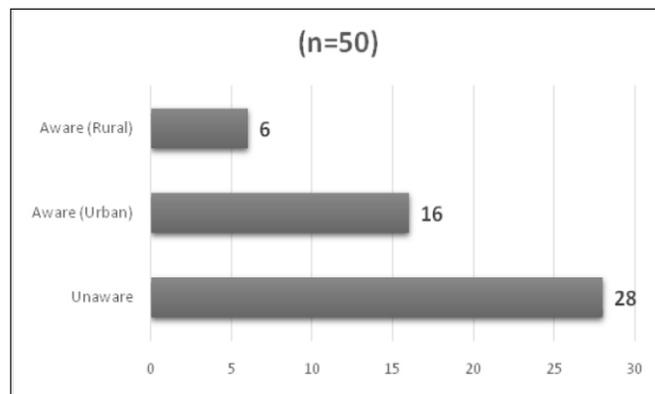


Figure 1: Hand hygiene awareness among study participants.

DISCUSSION

In the present study, we have observed that even visitors coming to urban hospitals have infected hands and some of them were carrying various harmful bacteria in their hands. Urban people have slightly cleaner hands and few of them were aware of the importance of hand hygiene. This study gives alarming information that even those people who are visiting hospitals are not practicing good hand hygiene. After asking question about importance of hand hygiene only 44% of people were aware and none of them have got any formal information at community level about hand hygiene.

In a study conducted by Ray SK et al⁷ in urban and rural communities in and around Kolkata, West Bengal, 100% respondents interviewed practiced hand washing after defecation either with soap (59%) or with plain water, ash, and mud (41%).

In another state of India, Kerala, the observed rate of hand washing with soap was 34% after defecation and 35% after cleaning the child. The observed rate of hand washing with soap in Ghana is only 3% after defecation, in Senegal it was 31% after defecation and 26% after cleaning the child. In rural areas of Nigeria 10% washed hands with soap and water after cleaning the child. In rural Kyrgyzstan, observed rates of hand washing with soap was 18% after using the toilets and none after cleaning the child. In exurban areas of Northern England observed rates of hand washing with soap was 47% after cleaning the child.⁸

The cause of low hand washing rates is rarely a lack of soap. Soap is present in almost all families worldwide, but it is commonly used for bathing and laundry, not hand

washing. Water deficiency could also not be a possible problem either, as hands can be effectively washed with little or recycled water. In studies around the world, the main reason given why rates of hand washing with soap are so low is that it is simply not a habit. The challenge remains to make hand washing with soap a habit and a social norm on a worldwide basis.⁹ Lack of convenient access to sink water, soap, and different time pressure can be barrier to getting people wash their hands thoroughly. In these situations, various hand sanitizers can be used as we see in television advertisements for hand hygiene.

CONCLUSION

Situation of hand hygiene is not appropriate in common public even among those people who are visiting hospital to meet patients and situation is much worse in rural area. This study also indicates that no effective community program is working to promote hand hygiene and majority of people are not aware of the importance of hand hygiene.

Footnote: The study has been conducted in association with Department of Microbiology, Eternal Heart Care Centre Hospital, Jaipur, Rajasthan.

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Corresponding Author

Aradhai Bana, 707, Fountain Square, Behind Hotel Lalit, Near Jawahar Circle, Jaipur, Rajasthan 302017, India.
email: aribana0090@gmail.com
