

Role of Hand Hygiene in Reducing Transient Flora on the Hands of Kitchen Staff Working In Hospitals Setting

Dr.Suneeta Sahu¹, Ms Minati Panja², Ms Sumita Nayak³, Ms Nirupama Sahoo⁴, Ms Ahalya Chhotaray⁵

¹Sr Consultant in charge clinical microbiology, ²Nursing Superintendent, ³Infection Control Nurse, ⁴In charge (ICN), ⁵Infection Control Nurse
Apollo Hospitals, Bhubaneswar, Odisha

Date of Submission: 26-01-2022

Date of Acceptance: 07-02-2022

I. Introduction

Hands of the healthcare workers are the main source of transmission of infection in healthcare facilities¹. We have to re look in the basics of infection control practices:- like hand hygiene as hand hygiene is a simple and low cost measure to reduce transmission of infection yet it has always been a concern in kitchen staff in preparation of patient foods, Attended and staff².

II. Aims And Objectives

- To promote hand hygiene practices in kitchen staff.

III. Materials &Methods

A Total sample size of 50 collected from different staff (N=36) working in Kitchen (5 staff used to prepare patient food ,1 staff prepare bakery items, 4 staff helps in Dinning food serving,10 staff helps in cooking food for hospital employee, 5 staff allot for salad cutting ,3 staff prepare liquid diet for patient ,3 staff help in chapatti making and 5 staff serve patient food). Finger print impression culture was collected from kitchen staff on blood agar plates which were incubated at 37⁰C for 24 hours, after 24 hours blood agar plate observed for micro-organism growth. Sample (finger print) was taken randomly during their duty time and sample was processed in our microbiology laboratory, isolates obtained from the culture were identified through gram stain and routine biochemical tests. Each person was educated on the technique of hand hygiene with soap and water. Both the culture plates shown to each health care workers to provide evidence .The WHO Posters on seven steps of effective hand washing steps were displayed in the appropriate areas of the kitchen as educational tool.

IV. Results

After the hand print surveillance, it was found that the hands of kitchen staffs were colonized with Staphylococcus spp, Coagulase negative Staphylococcus, Staphylococcus aureus, Pseudomonas species and Klebsiella pneumoniae.

A total of 36 participants who has significant bacterial count showed complete reduction in transient flora after performing hand hygiene, however, in 12 subjects only 70-80% reduction was seen, which became 2 subjects. After repeat training session on hand hygiene by demonstration method, 100% compliance achieved.

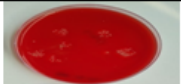

PRE HAND WASH FLORA		BLOOD AGAR 	ORGANISM ISOLATE FROM HCWs FINGER PRINT		
Growth 12 (24%)	No Growth 24 (48%)		PRE HAND WASH FLORA	ORGANISM	ISOLATION
POST HAND WASH FLORA N=12,(70%-80% reduction in transient flora)		Klebsiella Pneumoniae		1	2
Growth 2 (4%)	No Growth 10 (20%)	POST HAND WASH FLORA 	Staphylococcus aureus	3	6
POST HAND WASH FLORA (N=2)			Pseudomonas species	4	4
Growth 0	No Growth 4 (5.5%)=100%	POST HAND WASH FLORA	Coagulase negative Staphylococcus	4	4
			Staphylococcus spp	6	12

Table 1 :-As per finger print surveillance got the percentages of transient flora in the hands of the kitchen staff.

V. Discussion

Demonstrated the difference in finger print before hand washing and after hand washing. It helped us in possible food borne diseases with associated complication like UTI, respiratory infections, osteomyelitis, blood stream infection in every patient, attended and staff³.

VI. Conclusion

Hand hygiene is one of the most important interventions to remove the transient bacteria present on the hands of kitchen staffs.

This was achieved in the form of repeated training by demonstration of the proper hand washing steps which was required for hospital kitchen staff. Hand hygiene protocols, supervision & feedback; quality improvement initiatives are useful methods to improve compliance. These organisms were transient flora but in future could have led to serious food borne disease. The WHO hand hygiene protocol where practice by kitchen staff in hospital setting. Proper hand hygiene is mandatory for safe hospital environment.

Acknowledgement

The authors thanks with grateful acknowledgement to Kitchen staff.

References

- [1]. <https://www.cdc.gov>
- [2]. <https://www.ann-clinmicro.biomed central .com>
- [3]. <https://www.ncbi.nlm.nih.gov/pmc/article>.

Dr.Suneeta Sahu, et. al. "Role of Hand Hygiene in Reducing Transient Flora on the Hands of Kitchen Staff Working In Hospitals Setting." *IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)*, 21(02), 2022, pp. 40-41.