



CODEN [USA]: IAJPBB

ISSN: 2349-7750

INDO AMERICAN JOURNAL OF PHARMACEUTICAL SCIENCES

<http://doi.org/10.5281/zenodo.1239892>

Available online at: <http://www.iajps.com>

Research Article

HAND WASHING PRACTICE AMONG HEALTHCARE PROVIDERS WORKING IN PEDIATRIC DEPARTMENT

¹Dr. Binyamin Butt, ²Dr. Rabbia Rizvi, ³Dr Hafiz Yasir Saeed

¹MBBS, Avicenna Medical College, Lahore, Pakistan

²Services Hospital Lahore

³Medical Officer, Chak Hyderabad

Abstract:

Objective: This study aims to determine the hand washing practice among doctors and staff nurses working in neonatology unit of a teaching hospital. **Methodology:** The study design is cross sectional, to assess the knowledge and practice about hand washing among pediatricians and nurses attending neonates in a tertiary care hospital in Pakistan. Questionnaire was designed and 146 patients were interviewed by the authors, their attitude towards hand washing technique was assessed by face to face interviews and response was recorded on proforma after taking informed written consent and without showing participants identity. No ethical issue certificate was obtained from Hospital ethical committee. Doctors and nurses working in different government teaching hospitals were enrolled in study. **Result:** Knowledge about hand washing was 94% among doctors and nurses. Practice of hand washing technique was 59.6% among Postgraduate resident doctors and in nurses it was 36%. In consultants it was 40.4%. Thus low frequency of hand washing practice can lead to healthcare provider induced infections. **Conclusion:** Despite of knowledge about hand washing benefits and technique among doctors and nurses practice rate was very low. Thus it's a leading cause of hospital acquired infections in neonates.

KEY WORDS: Hand washing, infections, doctors, nurses, neonates, knowledge attitude and practice (KAP).

Corresponding author:

Dr. Binyamin Butt,

MBBS,

Avicenna Medical College,

Lahore,

Pakistan

QR code



Please cite this article in press Binyamin Butt et al., Hand Washing Practice among Healthcare Providers Working In Pediatric Department, Indo Am. J. P. Sci, 2018; 05(5).

INTRODUCTION:

Diarrhoea and respiratory tract infections spread most commonly due to feco-oral route micro-organisms transmission or person to person contact.[1,2] The effective reduction in these diseases can be achieved by following practicing hand hygiene protocols. Friedrich MND, et al emphasized on effective and frequent hand washing techniques in order to decrease disease burden specifically in pediatric age group [6]. A community survey was conducted and educational awareness seminars were organized in a community in Nigeria and training results were compared with the pre-training disease data of that particular community, a significant reduction in disease burden was observed [7].

Emphasis is not only about spreading knowledge about hand washing frequency but awareness about the effective hand washing techniques is need of the hour. WHO steps of effective hand washing are given in table:1

According to WHO, communicable disease control program the effective hand washing technique must be displayed outside lavatories or wash basins in a language easily understood by the native population and educational sessions should be carried out in community by the outreach medical staff working at primary healthcare level [3,7].

Despite of knowledge and awareness about benefits of hand washing the compliance is very poor. Different monitoring techniques must be utilized to improve compliance such as, soap utilization, sanitizers utility, infection control etc.[8]. Hospital acquired infection transmission rate can be effectively reduced by improving the compliance to hand hygiene protocols by primary healthcare providers [4,5,6].

Table 1: Steps for effective hand washing.

Serial Number	Steps
1	Wet both hands
2	Apply soap
3	Rub your palms
4	Rub interdigital spaces, palm and digits
5	Rotate the nails on the palm of other hand
6	Clean the dorsum of both hand by rubbing
7	Wash with clean water
8	Dry with clean paper or towel or let air dry.

METHODOLOGY:

It's a cross-sectional study to know about the knowledge, attitude and practice of healthcare providers i.e. doctors and staff nurses towards hand washing, in tertiary care hospitals. The no ethical issue certificate was obtained from hospital ethical board. The participants were enrolled after taking informed written consent and all participants were assured of the fact that their identity will not be revealed and all information collected from them will only be used for research and educational purposes. A questionnaire was designed to record the data collected from participants. The data collected on questionnaires was demographic profiles, awareness about effective hand washing protocols as defined by WHO, benefits of hand washing and attitude of participants towards hand hygiene was inquired. The study duration was one month. It was conducted in October 2017.

The doctors whether consultants or post graduate residents were enrolled in study and those staff nurses who had patient contact. The ward boys, sanitary staff, patients' attendants or miscellaneous ward staff was excluded from study. All participants were directly interviewed by the authors to minimize the chance of error. Data analysis was done by using SPSS version 20. To find variables association, chi-square test was applied.

Table 2: material used for hand washing.

Soap and water	62%
Plane water	6%
Hand rubbing or sterilium	32%

Table3: Knowledge about hand washing technique

Knowledge and technique	Percentage
Know proper technique	94.5%
Taught by seniors in ward	75.3%
Availability of soap and water in ward	68.5%
Availability of sanitizer or hand rub	47.9%

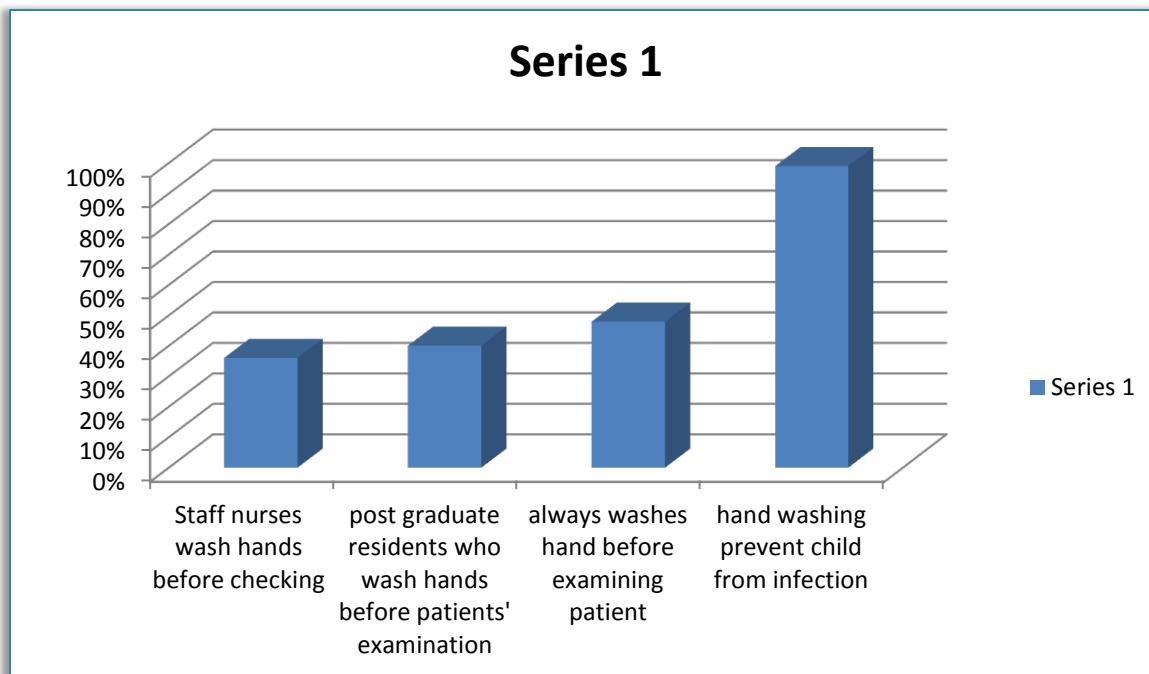


Figure:1 hand washing practice among healthcare providers.

RESULTS:

Total 146 healthcare staff was inquired. Out of all participants 90% staff worked in neonatology unit while 96% staff worked in pediatric medicine ward, which was 132 and 140 respectively. Skin cleaning by using spirit swabs prior to sampling was done by 87 (59.6%) healthcare providers. Before IV line maintenance 59.6% staff nurses clean child's skin with spirit swab. 68.5% consultants take care of washing hands before examining patients. The statistics of data collected about the knowledge and practice of all participants about hand washing is given in table 2,3 and figure 1.

DISCUSSION:

Safe hands technique is the important step towards reducing the hospital acquired infection among the patients of all age groups [9].

Despite of knowledge about the benefits of using safe hands technique, the compliance to hand hygiene protocols is very poor both in general public and in healthcare providers. The skin contact infections can be reduced to a greater level. The surgical theaters should also be thoroughly cleaned before every procedure to avoid acquired infection [10,11]. The pre surgery wash up techniques and proper gowning and gloving technique should opted by all surgeons and paramedic staff working in operation theaters.

The food handlers should also be careful in hand washing in order to avoid food borne diseases. The educational sessions must be carried out for

awareness in the community by the community health workers [12]. Different monitoring methods have been devised to assess the hand hygiene compliance among general public. These include soap utilization, alcohol utilization etc. [13].

CONCLUSION:

Despite of knowledge about hand washing benefits and technique among doctors and nurses practice rate was very low. Thus it's a leading cause of hospital acquired infections in neonates.

REFERENCES:

- 1- Luby SP, Rahman M, Arnold BF, Unicomb L, Ashraf S, Winch PJ, et al. Effects of water quality, sanitation, handwashing and nutritional interventions on diarrhea and child growth in rural Bangladesh: a cluster randomized control trial. *The Lancet Global Health* 2018; 6(3): e302-e315.
- 2- Park GW, Williamson KJ, DeBess E, Cieslak PR. High hand contamination rates during norovirus outbreaks in long-term care facilities. *Infection Control and Hospital Epidemiology* 2018; 39(2): 219-221.
- 3- Radek KS. Hand washing: new or old findings? *Journal of Public Health Policy and Planning* 2018; 2 (1):
- 4- Clark J, Crandall PG, Bryan CO. Climbing the intervention ladder to hand washing compliance:

- a review and directions for future research. *Food Control* 2018; 84: 544-551.
- 5- Bawankar S, Rangari P, Kamdi S, Meshram P. A study of knowledge, attitudes and practices on hand hygiene amongst residents and nursing staff at tertiary care hospital, drug Chhattisgarh, India. *Int. J. Curr. Microbiol. App. Sci* 2018; 7(4): 1591-1598.
- 6- Friedrich MND, Kappler A, Mosler HJ. Enhancing hand washing frequency and technique of primary care givers in Hrare, Zimbabwe: a cluster randomized controlled trial using behavioral and microbial outcomes. *Social Sciences and Medicine* 2018; 196: 66-76.
- 7- Ogundele OA, Ogundele T. Analysis of the effect of health education activities on selected child health determinants in two communities of Ile Ife, Nigeria. *Ethiopian Journal of Health Sciences* 2018; 28 (2).
- 8- Pyrek KM. Hand hygiene monitoring goes high-tech. *Infection Control Today*.
- 9- Andersson AE, Frodin M, Dellenborg L, Wallin L, Hok J, Gillespie BM, et al. Iteractive co-creation for improved hand hygiene and aseptic techniques in the operating room; experiences from the safe hands study. *BMC Health Services Research* 2018;18 (2)
- 10- Chen Y, Ji H, Chen LJ, Jiang R, Wu YN. Food safety knowledge, attitude and behavior among dairy plant workers in Beiging, Northern China. *International Journal of Envioronmental Research and Public Health* 2018; 15 (1): 63.
- 11- Ballweg CE. Hand hygiene: behavior change in college students. *JMU Scholarly Commons* 2018.
- 12- Trafialek J, Drosinos EH, Laskowski W, Gawlik KJ, Tzamalis P, Leksawasdi N, et al. Street food vendors' hygienic practices in some Asian and EU countries – a survey. *Food Control* 2018; 85: 212-222.
- 13- Esfandiari A, Salari H, Rashidian A, Masoumi Asl H, Foroushani AR, Sari AA. Eliminating healthcare associated infections in Iran: A qualitative study to explore stakeholders' views. *Health Policy and Management* 2018; 7 (1): 27-34.