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RESEARCH ARTICLE

HAND HYGIENE AUDIT TO STUDY ADHERENCE TO HAND HYGIENE IN A TERTIARY CARE HOSPITAL

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Abstract

Introduction: Hands are the main pathways of germ transmission during health care. Regular monitoring of adherence to Hand hygiene is very important to prevent hospital acquired infections. Direct observation method for WHO's 5 moments of hand hygiene is still the gold standard to provide qualitative & quantitative information about when and why failures in hand hygiene occur.

Material & Methods: A Prospective observational study was conducted from September 2022 to January 2023. Adherence to Hand hygiene was observed in 33 areas of a tertiary hospital. A total of 500 Health care workers are included in the study. Each area was observed for 5 days in a month for 1 hour. Hand hygiene complete adherence rate & partial adherence rate was calculated & analysed. Compliance to WHO moments of hand hygiene was also observed.

Results: Hand hygiene complete adherence rate (HHCAR) was 52%, Hand hygiene partial adherence rate (HHPAR) was 30.5% & non adherence rate was 17.5%. Adherence to WHO moments 1 & 5 was 30.2 & 33.6%. Adherence to moments 2,3,4 was 40.7%, 45.6% & 42.9% respectively.

Conclusion: Despite adequate hand hygiene facilities, Hand Hygiene compliance remains low in student nurses and interns. Regular training programmes on Hand hygiene in hospitals should focus on WHO moments 1 & 5 in particular.

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Introduction:-

Hands are the main pathways of germ transmission during health care. Regular monitoring of adherence to Hand hygiene is very important to prevent hospital acquired infections. Direct observation method for WHO's 5 moments of hand hygiene is still the gold standard to provide qualitative & quantitative information about when and why failures in hand hygiene occur[1]. Many factors like lack of knowledge among Health care workers (HCW) regarding the importance of hand hygiene in preventing disease transmission, incorrect technique, poor access to hand washing facilities, lack of motivation, understaffing and contact dermatitis contribute to poor adherence to hand hygiene[2].

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Material & Methods:-

A Prospective observational study was conducted from September 2022 to January 2023. A total of 100 student nurses, 100 staff nurses, 100 interns, 100 junior doctors & 100 senior doctors were included in the study. The Adherence to Hand hygiene of HCWs was observed in 33 areas of our hospital for 5 days in a month for 1 hour. We recorded all the possible opportunities for Hand hygiene in the 33 areas for a period of 5 days every month upto 5 months. Direct observations involved 20 opportunities per day. The observations were noted for all the WHO five moments of Hand hygiene and also adherence to steps of hand hygiene. A checklist was used. If an indication for Hand hygiene was noted, a tick was placed on the checklist next to the relevant guideline, under the column indication. If Hand hygiene occurred, another tick was inserted in the column "Hand hygiene occurred". If did not occur, no insertion was made. The procedure was followed for 5 days & over all compliance for complete hand hygiene & Partial hand hygiene adherence rate were calculated.

Results:-

Table 1:- Compliance to Hand hygiene:

Total No. of Healthcare workers	Total No. of Hand hygiene opportunities available	No. of times Hand hygiene followed completely	Hand Hygiene complete adherence rate(HHCAR)	No. of times hand hygiene followed partially	Hand Hygiene partial adherence rate(HHPAR)	Non adherence rate
500	500	260	52%	152	30.5%	17.5%

Table 2:- WHO Moment specific Hand hygiene rate:

Health care workers	Total number	No. of health care workers completely followed hand hygiene	Hand hygiene complete adherence rate(HHCAR)
Student nurses	100	43	30%
Staff nurses	100	74	50%
Interns	100	38	24%
Junior doctors	100	45	28%
Senior doctors	100	60	52%

Table 3:- Hand Hygiene Adherence Rate In Health Care Workers.

WHO's Moments of Hand Hygiene	No. of Opportunities available	No. of times moments followed	% of compliance (HHAR)
1	500	151	30.2
2	500	203	40.7
3	500	228	45.6
4	500	214	42.9
5	500	168	33.6

Discussion:-

In our study Hand hygiene complete adherence rate (HHAR) was 52%, whereas in the study of VithiyaGanesan et al [2], HHAR was 29.9%. In the study of Arun kumar P. et al [3], HHCAR was 86.27%. Lack of

appropriate hand hygiene products available at the point of care, difficulty accessing sink locations, products placed in inconvenient locations are the factors effecting hand hygiene compliance rate[4]. Despite adequate hand hygiene facilities in our hospital Hand Hygiene compliance remains low as in other studies. We suggest Hand Hygiene compliance should be incorporated as one of the measures of a HCW's overall performance to benefit patients and prevent hospital acquired infections. In our study WHO moment specific adherence to moment 1 & 5 were 30.2% & 33.6% respectively. Whereas in the study of VithiyaGaneshan et.al, adherence to moments 1& 5 were 48.4% and 47.6% respectively. Adherence to WHO moments 2,3,4 in our study were 40.7%, 45.6% and 42.9% respectively. Whereas in the Tanishaet.al[5] study the adherence was 68.2% and 65.5% respectively. In most of the studies we observed that compliance to moment 1 & 5 was low compared to other moments. It indicates that most of the HCWs tend to practise Hand hygiene more when they are at risk of contracting microorganisms from patients but ignore Hand hygiene practice when patients are at risk of contracting an infection.

In our study senior doctors had a better HHCAR than other junior doctors. This is in accordance with the study of Ra'awji BAA et.al[6] Health-care workers especially senior doctors have positive attitude toward hand hygiene guidelines. They recognize the importance and they try to follow them always.

In our study staff nurses had better HHCAR when compared to student nurses which was in accordance with the study of Ho SE et.al [7]. Adherence to hand hygiene protocols in hospital by nurses enables in prevention and control the HCAI. Nurses compliance to hand hygiene practice and knowledge was good. Nurses' years of service have great implications on compliance to hand hygiene practice[4].

In Interns & student nurses HHCAR was low in our study which is comparable to the study of Gluck PA, et al[8] & Sadule-Rios N et al [4]. Lack of patient safety training, which includes the importance of proper Hand hygiene during their undergraduate medical education, Lack of knowledge regarding impact of hand hygiene on patients are the factors effecting the Hand hygiene rate among Interns.

Conclusion:-

Hand Hygiene compliance should be incorporated as one of the measures of a HCW's overall performance to benefit patients and prevent hospital acquired infections. We recommend that Hand hygiene training programmes for Health care workers should stress on WHO moments 1& 5 in the interest of proper patient care. Interns & student nurses should be properly trained in Hand hygiene protocols both at the time of inception & also regularly thereafter.

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