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Implementation of Five-Moment Hand Hygiene at Aceh Government Hospital

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Abstract

Background: Hand Hygiene is one way to prevent cross-contamination from microorganisms to prevent the occurrence of Health Care-Associated Infections (HAIs); you can use a handrub or soap. Preventing infection transmission and reducing the number of HAIs by implementing five moments of hand hygiene, namely before contact with patients, before aseptic procedures, after contact with patients, after exposure to patient body fluids, and after exposure to the patient's environment, nurses can reduce the spread of infections that are potentially life-threatening to patients in health care facilities, apart from that the implementation of infection prevention in health care facilities not only protects patients but can protect nurses from HAIs infection, but hand hygiene compliance

among nurses is still not optimal, this can lead to a high spread of HAIs. Applying five-moment is one of the indicators JCI (Joint Commission International) requires to achieve 100% for all health workers who provide nursing care.

Methods: The technique for collecting data used accidental sampling with 22 nurses in the Inpatient Room of Aceh Government Hospital. Data were taken using observation sheets and analyzed using descriptive statistics.

Results: The implementation of five-moment hand hygiene by nurses in the room is in the wrong category

Recommendations: Hospital management, especially KPRS, conducts direct supervision to optimize five-moment hand hygiene.

Keywords: Hand Hygiene, Infection, Nurse, Five Moments

1. Introduction

Patient Safety is a top priority in risky health services. The risk that often occurs is the risk of transmission of infection due to health care. Severe pain due to illness requires a long time for treatment, so hospitalization is longer and requires a lot of money; severe cases of infection can even cause death. One of the efforts of the World Health Organization to prevent the transmission of disease and reduce the numbers Healthcare Associated Infection (HAIs) is to provide guidelines for hand hygiene for health workers; implementing good hygiene practices can reduce the spread of infections that have the potential to threaten the lives of patients in health care facilities^[1].

Implementing Five Moments hand hygiene is to perform hand hygiene before contact with patients, before carrying out aseptic procedures, after exposure to patient body fluids, after contact with patients, and after contact with the environment around the patient. Nurses can reduce the spread of infections that have the potential to threaten the lives of patients in healthcare facilities by implementing five-moment hand hygiene, besides that implementing infection prevention in healthcare facilities not only protects patients but can protect nurses from HAIs infection but hand hygiene compliance among nurses is still lacking optimally, this can lead to a high spread of HAIs. Applying five-moment hand hygiene is one of the indicators required by JCI (Joint Commission International) to reach 100% for all health workers who provide nursing care^[2]. According to primary health research data for 2016, the national prevalence of correct hand hygiene behavior is still alarming; 76.8% of health workers do not perform hand hygiene.

The highest prevalence of nosocomial infection was in the Eastern Mediterranean and Southeast Asia, namely 11.80% and 10%, while in Europe and the Western Pacific, respectively, 7.70% and 9%^[3]. In Indonesia, the HAIs rate reached 15.74% higher than in developed countries which ranged from 4.8% -15.5%; the incidence of nosocomial infections in patients in inpatient wards was in the range of 5.8% -6%, and nosocomial infections in the surgical wound in the field of 2.3%-18.3%^[4].

Data from research related to nosocomial infections in November 2021 showed the number of nosocomial infections at dr. Zainoel Abidin reached 23 incidents. The incidence that occurs is phlebitis infection that occurs due to inflammation or inflammation of the veins. And the writing results related to Five Moments for Hand Hygiene at Dr. Zainoel Abidin, a hospital nurse who does not implement Five Moments for Hand Hygiene by 75%^[5].

Health workers have a significant role in breaking the chain of transmission of this infection by hand hygiene, but hand hygiene compliance among health workers is still not optimal; this can lead to a high spread of HAIs.

The main reason nurses don't carry out five-moment hand hygiene is due to nurses' and health workers' lack of awareness; often, hand hygiene is only after treating patients.

The obstacles to implementing five-moment hand hygiene are nurses' lack of awareness and regular supervision in the inpatient room.

2. Methods

This case study uses a descriptive statistical research approach using a cross-sectional study design. The data collection technique was carried out using observation using the adopted observation sheet [5]. Data was collected from Dec 24, 2022, to Jan 6, 2023. The population in this study was 24 nursing staff in the inpatient room. The research sample consisted of 22 respondents using the Accidental Sampling technique.

3. Results

Based on the results of observations, the following results were obtained:

Table 1: Respondent Characteristic

S. No	Characteristic	F	%
1	Gender		
	Man	13	59.1
	Woman	9	40.9
2	Age		
	17-25 Years	1	4.5
	26-35 Years	18	81.8
	36-45 Years	3	13.6
3	Education		
	D3	19	86.4
	Bachelor	3	13.6
4	Length of work		
	< 5 years	3	13.6
	>5 Years	19	86.4

Based on Table 1 shows that the average age of nurses in the ward is nurses who are at the age of 26-35 years, as many as 18 people (81.8%). The majority of nurses are male, 13 people (59.1%). Then the highest education level was D3 graduates, with 19 people (86.4%). On average, 19 nurses (86.4%) have worked for >5 years.

Table 2: Five-moment hand hygiene implementation and five hand hygiene implementation categories

S. No	Variable & Subvariable	F	%
1	Hand hygiene before contact with patients		
	Held	8	36.4
	Not Implemented	14	63.6
2	Hand hygiene before aseptic procedures		
	Held	8	36.4
	Not Implemented	14	63.6
3	Hand hygiene after contact with patients		
	Held	21	95.5
	Not Implemented	1	4.5
4	Hand hygiene after exposure to patient body fluids		
	Held	22	100
5	Hand Hygiene after contact with the patient's		

environment			
	Held	10	45.5
	Not Implemented	12	54.5
6	Implementation of five-moment hand hygiene		
	Good	8	36.4
	Not good	14	63.6

The results of data collection in Table 2 show that hand hygiene before contact with patients was not carried out in 63.6%, hand hygiene before aseptic procedures was not carried out in 63.6%, hand hygiene after contact with patients was carried out in 95.5%, hand hygiene after being exposed to fluids the patient's body was carried out 100%, hand hygiene after contact with the patient's environment was not carried out 54.5% and the five-moment hand hygiene implementation category was not good 63.6%.

4. Discussion

Based on the results of this study, it can be concluded that of the 22 respondents, eight (36.4%) carried out the five-moment hand hygiene well, and 14 (63.6%) did not correctly carry out the five-moment hand hygiene. The results of this study are in line with research [6], which shows 54.3% did not carry out five-moment hand hygiene; regarding the analysis of the implementation of prevention and control of nosocomial infections in the ICU, which stated that even though nurses knew about ways to do good hand hygiene, nurses still did not do five-moment hand hygiene.

Compliance with hand hygiene, which is still low among health workers, can lead to a high prevalence of HAIs. Hand hygiene is vital in prevention because it is more effective and low cost; it is estimated that by carrying out hand hygiene, the impact of reducing HAIs is 50% [7]. Several things can make a person disobedient in washing hands apart from work culture factors, namely leadership supervision, supervision or supervision carried out by the head of the room is the main thing in instilling one's compliance to obey in daily activities [8].

The observations on the implementation of hand hygiene before contact with patients showed that the most dominant result was "Not Implemented" in 14 respondents, with a percentage of 63.6%. The results of this case study are consistent with the results of research by Kustian *et al.* [9], which shows that the implementation of five-moment hand hygiene at the moment before contact with the patient category does not apply as much as 68.3% and the type applies as much as 31.7%. These results were obtained due to the absence of strict supervision by the leadership and the habit of nurses always wearing gloves before touching patients, and the actions of nurses who were always in a hurry and considered the risk small because most of the activities were carried out non-invasively such as just changing infusions.

The observations on the implementation of hand hygiene before aseptic procedures showed that the most dominant result was "Not Implemented" in 14 respondents, with a percentage of 63.6%. Research by Amelia *et al.* [10] also shows that 75.5% of respondents did not wash their hands at this moment. These results were obtained because nurses thought there was no need to wash hands if hands did not look dirty or felt dirty and thought that wearing gloves would break the chain of infection transmission, and there was a lack of tissue and no hand dryers in the room. This

makes it difficult for nurses to wear gloves after washing their hands.

The observations on the implementation of hand hygiene after contact with patients showed that the most dominant result was "Implemented" by 21 respondents, with a percentage of 95.5%. This research is in line with Kustian *et al.* [9], which explained that (93.3%) of respondents carried out hand hygiene after contact with patients. This study demonstrates that most nurses care more about themselves. Therefore, nurses perform hand hygiene after contact with patients for fear of contracting or getting a disease that can cause infection to these nurses.

The results of observations on the implementation of hand hygiene after being exposed to patient body fluids obtained the most dominant result, namely "Implemented" in 22 respondents with a percentage (100%). This research is under that conducted by Amelia *et al.* [10], which explains (64.4%) of respondents carry out hand hygiene after being exposed to patient body fluids. This study demonstrates the reasons for the high adherence of nurses in Moment 4, namely the concerns of staff about their health and considering hand washing to be necessary as a form of self-protection against the risk of exposure to patient's body fluids.

The observations on the implementation of hand hygiene after contact with the patient's environment obtained the most dominant result, "Not Implemented," in 12 respondents with a percentage (54.5%). This research is under that conducted by Kustian *et al.* [9], who explained that (61.7%) of respondents did not carry out hand hygiene after contact with the patient's environment. This happens because most nurses think there are no harmful germs or pathogens on their hands. After all, health workers do not touch patients or expose them to patient body fluids.

5. Conclusion

Implementation of five-moment hand hygiene by assessing five moments, namely before contact with patients, 63.6% were not carried out; before aseptic procedures, 63.6% were not carried out; after contact with patients, 95.5% carried out; after being exposed to patient body fluids 100% carried out and after contact with the patient's environment 54.5% were not carried out. Hospital management, especially KPRS, conducts direct supervision to optimize five-moment hand hygiene.

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