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## **OVERVIEW OF A NURSE IN IMPLEMENTING 5 MOMENTS OF HAND WASHING IN THE PREVENTION OF NOSOCOMIAL INFECTION**

**Qurrotul Aeni\*, Rina Anggraeni, Andriyani Mustika Nurwijayanti**

Sekolah Tinggi Ilmu Kesehatan Kendal, Jl. Laut No.31, Ngilir, Kendal, Kendal, Central Java 51311, Indonesia

\*[qurrotul80@gmail.com](mailto:qurrotul80@gmail.com)

### **ABSTRACT**

Behaviors to prevent the spread of disease from person to person or from equipment to person can be carried out by placing a barrier between the microorganism and the individual (patient or health worker). The barrier can be physical effort in the form of washing hands. There are "5 moments" when health workers must perform hand hygiene. The aim of this research is to describe the implementation of the 5 moments of hand washing by nurses in the Bougenville ward of RSUD Dr. H. Soewondo Kendal. The type of research used is quantitative descriptive research. The sample in this study were nurses in the Bougenville room on the first and second floors of RSUD Dr. H. Soewondo Kendal as many as 31 respondents with a sampling technique using total sampling technique. The instruments used were questionnaires and observations. The questionnaire uses the standardized SPO KARS 2017. The research analysis used is univariate analysis. The results of research on the implementation of 5 hand washing moments, the majority of respondents always wash their hands before contact with patients, 23 (74.2%), nurses always wash their hands before carrying out aseptic procedures, 29 (93.5%), nurses always wash their hands after being exposed to body fluids. 29 patients (93.5%), 29 (93.5%) nurses always wash their hands after contact with patients, 29 (93.5%) nurses always wash their hands after contact with the patient's environment.

Keywords: five moments for washing hands; implementatation; nosocomial infection

### **INTRODUCTION**

Nosocomial infections are infections that occur in hospitals related to the provision of health services (Handayani et al., 2022). Nosocomial infections are a health problem that can increase the morbidity and mortality rates of patients treated in hospital. From WHO surveillance data, it is stated that the incidence rate is 5% per year. 3 According to estimates, 1.4 million patients suffer from nosocomial infections in developing and developed countries. In Indonesia itself, research conducted in 11 hospitals in DKI Jakarta in 2004 showed that 9.8% (with a range of 6-16%) of inpatients had new infections during treatment (Caesarino, 2019). From WHO survey data, it is stated that the incidence rate is 5% per year. According to estimates, 1.4 million patients suffer from nosocomial infections in developing and developed countries. In Indonesia itself, research conducted in 11 hospitals in DKI Jakarta in 2004 showed that 9.8% (with a range of 6-16%) of inpatients had new infections during treatment. Meanwhile, in the Central Java region, nosocomial infections reached 0.5%. Nosocomial infections can be prevented by 10% of the environment and 90% of behavior. One behavior to prevent the spread of disease from person to person or from equipment to person can be done by placing a barrier between microorganisms and individuals (patients or health workers). Barriers can take the form of physical efforts in the form of washing hands (Abdullah, 2014; Wulandari, 2017).

WHO states that effective hand hygiene involves health awareness, indications and when perform hand hygiene. There are "5 moments" where health workers must perform hand hygiene include: Before contact with patients, before carrying out aseptic procedures, after exposure to patient body fluids, after contact with patients, and after contact with the patient's

environment (WHO, 2020). Looking at the existing background, this research aims to find out a description of the implementation of 5 moments of hand washing by nurses in the Bougenville ward at RSUD Dr. H. Soewondo Kendal.

**METHOD**

The type of research used is quantitative descriptive research. The sample in this study were nurses in the Bougenville room on the first and second floors of RSUD Dr. H. Soewondo Kendal as many as 31 respondents with a sampling technique using total sampling technique. The instruments used were questionnaires and observations. The questionnaire uses the standardized SPO KARS 2017. The research analysis used is univariate analysis.

**RESULTS AND DISCUSSION**

Table 1. Characteristics of Respondents Based on Age

Variabel	Min	Mix	Mean	Median
Age	24	56	35,55	35

Table 1 Shows that the average age of respondents is 35 years, with the youngest being 24 years and the oldest being 56 years.

Table 2.  
Characteristics Based on Education (n=31)

Variable	f	%
D3	15	48.6
Ners	16	51.4

Table 2 shows that the majority of respondents are as educated as nurses 16 (48.6%).

Table 3.  
Frequency Distribution of Respondents' Length of Work (n=31)

Variable	f	%
< 1 years	1	3,2
1-4 years	12	38,7
>4 years	18	58,1

Table 3 Showed that the majority of respondents had worked for >4 years, totaling 18 respondents (58.1%).

Table 4.  
Frequency Distribution Implementation of 5 Hand Washing Moments (n=31)

Variable	Criteria	f	%
I wash my hands before contact with patient	Always	23	74,2
	Often	5	16,1
	Seldom	3	9,7
	Never	0	0
I wash my hands before carrying out aseptic prosedures	Always	29	93,5
	Often	3	6,5
	Seldom	0	0
	Never	0	0
I wash my hands after being exposed to a patient's body fluids	Always	29	93,5
	Often	3	6,5
	Seldom	0	0
	Never	0	0
I wash my hands after contact with patient	Always	29	93,5
	Often	3	6,5
	Seldom	0	0
	Never	0	0
I wash my hands after contact with the patient's environment	Always	29	93,5
	Often	3	6,5
	Seldom	0	0
	Never	0	0

Table 4 shows that 23 (74.2%) nurses always wash their hands before contact with patients, 29 (93.5%) nurses always wash their hands before carrying out aseptic procedures, 29 (93.5%) nurses always wash their hands after being exposed to patient body fluids (93.5%), 29 (93.5%) nurses always wash their hands after contact with patients, 29 (93.5%) nurses always wash their hands after contact with the patient's environment. Expectations so that they are more realistic about new situations (Putri, 2019). In general, age is an indicator in every decision making that refers to it with each experience and the older you get in receiving instructions and carrying

## **DISCUSSION**

### **Characteristics of Respondents Based on Age**

The results of research on the distribution of respondents based on the age of nurses in the Bouegenville inpatient ward at RSUD Dr. H Soewondo Kendal is known that the majority of nurses are aged 24 – 35 years. This research is line with research conducted by (Pangaribuan, et al 2020) 30 respondents aged 26 – 35 years old namely as many as 27 respondents out of Age 26 – 35 years is also called early adulthood, psychologically in the early adult group, a person has a tendency to adapt new life patterns and to new social them out commond will become more responsible. The older you are, the more mature you will be in thinking and acting (Rikayanti, 2019). Research conducted by (Sani & Pratiwi, 2019) shows that personal maturity or age influences a person's level of compliance in carrying out the 5 moments of washing hands correctly.

### **Characteristics Based on Education**

The results of research on the distribution of respondents based on the education of inpatient nurses at Bouegenville Hospital Dr. H. Soewondo Kendal, the majority of nurses have 16 nurses (48.6%). This research is in line with research conducted by Handayani et al (2022). The research showed that of the 86 respondents, the majority of respondents with Nurse education were 77 nurses (89.5%). Education can broaden a person's insight or knowledge and is a form of learning process. Nurses with higher education will have greater knowledge about the 5 moments of hand washing compared to nurses with a low level of education (Palo, 2019). The higher the nurse's education, the more information there is about the 5 moments for washing hands.

### **Frequency Distribution of Respondents' Length of Work**

The results showed that the majority of respondents had worked for > 4 years, 18 respondents (58.1%), 12 (38.7%) respondents worked for 1 – 4 years, and 1 (3.2%) respondent worked < 1 year. Length of work is one of the factors that can influence a person's performance, the longer a person works, the better their experience and understanding of their work will be and a high level of commitment will be formed and with this commitment they will makes someone more responsible for their work (Irianto, 2019). The results of Walembuntu and Gobel's research (2020) provide results; which is different in that nurses who are more experienced and have a long period of service will not always provide better performance

### **An overview of nurses implementing 5 moments of hand washing before contact with patients**

The results of the study showed that respondents always washed their hands before contact with as many patients 23 (74.2%), 5 (16.1%) respondents answered often, and 3 (9.7%) respondents answered rarely wash their hands before contact with patients. To prevent cross transmission from one patient to another, health care workers must perform hand hygiene immediately before touching a patient or when entering the patient zone. In addition, hand hygiene must be carried out close to the treatment area to avoid re-contamination if the staff's hands come into contact

with objects far from the patient, such as door handles. Hand hygiene in this indication will prevent potential cross-colonization with external pathogens (Effendi et al., 2022).

### **Before Carrying Out Aseptic Actions**

The research results showed that 29 (93.5%) respondents always washed their hands before carrying out aseptic procedures and 2 (6.5%) respondents answered that they often washed their hands before carrying out aseptic procedures. Hand hygiene measures in the patient zone will prevent exposure to infections whether skin, mucosa, or environment and before contact with critical areas (Effendi et al., 2022). The results of Kustian and Baharuddin's research (2020) stated that there were several nurses who were not compliant in implementing the 5 moments of hand washing before carrying out aseptic procedures because the nurses had used gloves assuming they were protected so the nurses felt there was no need to carry out hand hygiene before that moment. However, gloves do not provide full protection against bacterial or pathogenic contamination of the hands and gloves cannot replace the need for hand hygiene, so health workers must wash their hands before wearing gloves and after removing them and gloves must also be changed for each patient (Daulani et al., 2021).

### **After Exposure to Patient Body Fluids**

The research results showed that 29 (93.5%) respondents always washed their hands after being exposed to patient body fluids and 2 (6.5%) respondents answered that they often washed their hands after being exposed to patient body fluids. Most nurses care more about themselves, therefore nurses perform hand hygiene after contact with patients because they are afraid of being exposed to and contracting diseases that could cause infection to the nurse (Kustian and Baharuddin, 2020). 29 (93.5%) nurses always wash their hands after contact with patients, 29 (93.5%) nurses always wash their hands after contact with the patient's environment.

### **After Contact with the Patient**

The research results showed that respondents always washed their hands after contact with as many patients as possible 29 (93.5%) and 2 (6.5%) respondents answered that they often wash their hands after contact with patients. Wash hands after touching a patient (including: touching the patient's body, clothes and clothes) function to protect health workers, patients and the environment from germs (Agustin, 2020). According to research conducted by Handayani in 2022, it was explained that the fourth moment of hand washing is washing hands after contact with a patient, washing hands immediately after removing gloves. Based on observations, all nurses in the room always wash their hands after using gloves. Although not all nurses wash their hands according to the SOP. This research is in line with research conducted by Nasrul (2017), which states that most nurses care more about themselves, therefore nurses carry out hand hygiene after contact with patients because they are afraid of being exposed to and contracting diseases that can cause infection to the nurse.

### **After Contact with the Patient's Environment**

The research results showed that 29 (93.5%) respondents always washed their hands after contact with the patient's environment and 2 (6.5%) respondents answered that they often washed their hands after contact with the patient's environment. Washing hands after coming into contact with the environment around the patient includes touching the patient's bed, tools around the patient or other equipment used by the patient, paper for writing around the patient (Agustin, 2020). According to the results of research conducted by Radya (2019), the environment of health facility employees, especially nurses, is one of the factors that can influence hand washing compliance. According to research conducted by Agustin (2020), the results showed that there was no relationship after contact with the patient's environment nurse

compliance. This is because one of the hospital SOP steps is to wash hands for 20-30 seconds, but in the researchers' observations several nurses did not apply this step after coming into contact with the patient's surroundings.

## **CONCLUSION**

The results of this research showed that the majority of respondents always washed their hands before contact with patients, 23 (74.2%), nurses always washed their hands before carrying out aseptic procedures, 29 (93.5%), nurses always washed their hands after being exposed to liquids. 29 (93.5%) of the patient's body, 29 (93.5%) nurses always wash their hands after contact with the patient, 29 (93.5%) nurses always wash their hands after contact with the patient's environment.

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