



ANALYSIS NURSE BEHAVIOR IN PREVENTION AND CONTROL OF NOSOCOMIAL INFECTIONS

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ABSTRACT

In this study, nosocomial infections are very influential on the patient's overall health condition and can increase morbidity and mortality. The purpose of this study was to determine and analyze the ability of nurses in this regard. This type of research is qualitative research with an interactive approach. The source of informants was used as many as 6 nurses, 6 heads of rooms. Collecting data through in-depth interviews, documentation study, and observation. The results showed that the ability of nurses to prevent and control nosocomial infections was not in accordance with the rules according to WHO and was not optimal. The causes include lack of knowledge and the need for human resources as well as supporting tools, the convenience of supporting facilities, training/socialization, monitoring and evaluation, and coordination between units. The analysis is described in descriptive form through data collection steps, data reduction, data presentation, and drawing conclusions.

Keywords: *Knowledge, Nurses, Prevention and Control, Nosocomial Infection.*

INTRODUCTION.

The level of quality of health services, especially nursing services in hospitals, can be assessed through various indicators, one of which is through an assessment of nosocomial infections. Nosocomial infection is an infection that a patient gets during treatment and occurs for 72 hours, where previously the patient did not show signs and symptoms of infection at the time of hospital admission (Pristiwani, 2013).

Where according to Darmadi (2013), nosocomial infections can increase morbidity and mortality. Various studies have shown that nosocomial infections have the potential to increase disease severity and emotional stress which reduces the patient's quality of life. Therefore, nosocomial infection is currently one of the types of patient safety incidents in the hospital (KARS, 2015). Also, increasing the length of treatment days, the use of drugs and supporting examinations due to nosocomial infections will increase the cost of patient care (Nasution, 2012).

Prevention of nosocomial infections can be done by using standard precautions, including wearing Personal Protective Equipment (PPE), caring for patient equipment and sharp instruments, cleaning the environment, placing patients, and carrying out 5 steps of washing



hands, namely: before and after touching the patient, before and after the action. or aseptic, after being exposed to the patient's body fluids, before and after performing invasive procedures, after touching the area around the patient or the environment (Handojo, 2015).

The incidence of nosocomial infections in the world is still very high, both in developing and developed countries. In Indonesia, infection is still the main cause of death and morbidity in hospitals and other health service facilities (Herpan, 2012).

Statistical data according to WHO (2010), sources of nosocomial infection can come from visitors, hospital staff, patients, or the hospital environment. According to Darmadi (2013), nursing staff as officers who are always in contact with patients (for 24 hours) are the foremost implementers in efforts to prevent and control nosocomial infections. Lack of nurses' attention to sterile techniques when acting, the length of the nursing process, less than optimal service standards, and the density of patients in the room being treated by nurses affect the occurrence of nosocomial infections.

Therefore, nurses are expected to have the ability to control nosocomial infections according to WHO guidelines (2012), namely maintaining the cleanliness of hospitals that are guided by nursing policies and practices; monitoring of aseptic techniques including hand washing and use of isolation, reporting to the doctor if there are any problems or signs and symptoms of infection during the delivery of health services; isolate if the patient shows signs of infectious disease; limit the patient's exposure to infections originating from visitors, hospital staff, other patients or equipment used for diagnosis or nursing care; as well as maintaining the safety of equipment, medicines and care equipment in the room from the transmission of nosocomial infections.

LITERATUR REVIEW

2.1. Behavior

The definition of behavior is an activity or activity of the organism (living creature) concerned which can be observed directly or indirectly. Human behavior comes from the impulses that exist in humans, while the impulse is an attempt to meet the needs that exist in humans.

Some of the behaviors are:

a. Closed Behavior (CoverBehavior)

A person's response to a stimulus is in disguised or closed form (cover). The response or reaction to this stimulus is still limited to attention, perception, knowledge or awareness, and attitudes that occur in people who receive the stimulus, and cannot be observed by other people.

b. Overt Behavior



A person's response to a stimulus in the form of real or open action. The response to the stimulus is clear in the form of action or practice, which can be easily observed or seen by others. Adtmaja (2012).

2.2. Nosocomial Infection

Nosocomial infection or Health Care-Associated Infection (HCAI) is an infection that occurs while the patient is in a health facility, where there are no signs of infection or symptoms of the patient being incubated at the time of admission to the hospital. (WHO, 2010).

Nosocomial infections are hospital-acquired infections that occur in patients who are treated for 72 hours (Brooker, 2014). Darmadi (2013) states that nosocomial infections are infections acquired by patients while in the nursing care process or hospitalized. Nosocomial infections occur because of the transmission of pathogenic microbes that originate from the hospital environment and its devices. Based on the above definitions, it can be concluded that nosocomial infections are local and systemic infections that occur not during the incubation period but when the client is hospitalized.

The types of nosocomial infections according to Gruendemann (2015) are:

a. Surgical Wound Infection (ILO)

The risk of developing the ILO is determined by 3 factors, namely the amount and type of microbial contamination in the wound, the state of the wound at the end of the operation (determined by the surgical technique and the disease process encountered during the operation), and the susceptibility of the host.

b. Urinary Tract Infection (UTI)

These infections are associated with procedures for wearing indwelling catheters and urinary drainage systems or other urological equipment. The indwelling catheter forms a mechanism that allows bacteria to enter the bladder. The length of the catheter insertion is an important variable in determining whether a patient has an infection. Meanwhile, a closed drainage system will reduce the risk of UTIs.

c. Bloodstream infections

This infection is associated with the insertion of an intravascular (IV) tube. Duration of intravascular tube insertion is a major determinant of bacterial colonization. The longer the tube is in place, the higher the risk of infection.

d. Decubitus

Decubitus sores are sores on the skin and/or underlying tissue that occur in a hospital due to continuous pressure due to rest

e. Ventilator-Associated Pneumonia (VAP)

VAP is the most common form of hospital infection in the Intensive Care Unit (UPI), especially in patients who are mechanically ventilated. According to Widyaningsih (2012), VAP is



pneumonia acquired in a hospital which occurs during 48 hours when the patient is assisted by mechanical ventilation, either through an endotracheal tube or a tracheostomy tube.

2.3. Clinical Symptoms of Nosocomial Infection

Clinical symptoms of nosocomial infection can occur locally and systemically (Potter and Perry, 2011). Local clinical symptoms will provide a clinical picture according to the organ being attacked, for example, if the lung organ is attacked it will cause symptoms such as coughing, shortness of breath, chest pain, restlessness, and so on.

If the digestive organs are affected, it will cause clinical symptoms such as nausea, vomiting, bloating, stomach cramps, and so on (Darmadi, 2013).

Systemic clinical symptoms cause more symptoms than local clinical symptoms. Generally, it causes fever, feeling weak, decreased appetite, nausea, dizziness, enlarged lymph glands, and so on (Potter and Perry, 2011). Darmadi (2013) also states that an infection is acquired from the hospital if it has the following characteristics:

1. When the patient was admitted to the hospital, there were no clinical signs of the infection.
2. When the patient is admitted to the hospital, he is not in the incubation period of the infection. Clinical signs of infection appear at least 3 x 24 hours after starting treatment.
3. The infection is not a residual from the previous infection.
4. If at the time of admission to the hospital there were no signs of infection, and it was proven that the infection was acquired by the patient when he was admitted to the same hospital and has never been reported as a nosocomial infection.

2.4. Rules Of Nurses Control of Nosocomial Infection

Nurses as nursing care providers are closely related to the occurrence of nosocomial infections in hospitals because nurses are responsible for providing a safe environment for patients, especially in the PPI nursing process. So, nurses are at the forefront of efforts to prevent and control nosocomial infections (Potter and Perry, 2011).

The standard nursing care factors that influence the occurrence of nosocomial infections are the classification and number of personnel who can carry out and practice aseptic techniques; suitable, ready-to-use and sufficient equipment and drugs; adequate physical and hygienic treatment room; aspects of workload in dividing the number of patients with nursing staff, and the number of patients treated (Darmadi, 2013). In addition, the role of nurses in infection control is to provide consulting services on all aspects of PPI using methods based on research evidence, practitioners, and cost effectiveness (Brooker, 2014).



METHODS.

This type of research is qualitative narrative research which is intended to obtain in-depth information about the behavior of nurses in preventing and controlling nosocomial infections at the UPTD Public Health Inpatient.

Then, the data are grouped based on needs with an interactive approach to the subject for further analysis. The interactive approach is an in-depth study using direct data collection techniques from people in their natural environment.

Research location at UPTD Public Health Inpatient. The reason for choosing the research location was because no research had been conducted on the same topic as this research topic.

This research is a qualitative descriptive study, with more descriptive characteristics from the results of interviews and observations. The data that has been obtained will be analyzed qualitatively and described in descriptive form. The data analysis technique in this study followed the steps proposed by Bungin (2012), namely:

1. Data Collection

Data collection activities in this study were using in-depth interviews.

2. Data Reduction

Reduction is carried out since data collection begins by summarizing, coding, searching for themes, creating clusters, writing memos, and so on to set aside irrelevant data/information.

3. Display Data

The presentation of qualitative data is presented in the form of narrative text. The presentation can also be in the form of matrices, diagrams, tables, and charts.

4. Verification and Confirmation of Conclusions (Conclusion Drawing and Verification)

Drawing conclusions in the form of interpretation activities, namely finding the meaning of the data that has been presented.

ANALYZE.

4.1. Results

By the research objectives in Chapter 1, this sub-chapter will present the results of research in the form of informant characteristics and research data including the ability of nurses to prevent and control nosocomial infections and their determinants in the implementation of prevention and control of nosocomial infections at the UPTD in the inpatient health center. Data obtained through direct interviews (primary data) and observation. The research results from the interview activities were recorded in the form of a transcript and then simplified by selecting and focusing on important things to get a sharper picture.

Based on the results of interviews conducted with nurses at the UPTD Public Health inpatient Mandrehe, it was known that the knowledge of nurses was classified as good. However,



there are still nurses who do not know what nosocomial infection is and how to prevent nosocomial infection. This can be seen from the following statement:

"Nosocomial infection is an infection that can be obtained in health services, usually it affects patients who have been more than 4 days old. Many factors cause nosocomial infection, such as factors from nurses who do not keep the patient clean, do not use gloves or personal protection, and are not sterile/clean. For the prevention of nosocomial infection itself, most importantly, must use personal protective equipment "

"As far as I know, nosocomial infection is an infection that is acquired in the hospital. Many causes can cause nosocomial infection, usually due to sleeping too long, most often it is like pressure sores. For prevention, just use PPE and keep it clean "

"Nosocomial infection most often occurs in the hospital, and it is found in the hospital because it takes too long in the same position to become decubitus, coupled with lack of hygiene, so you still have to maintain cleanliness"

"Nosocomial infection is a disease that can be obtained in the hospital, most often it is decubitus, sometimes the patient's factors are also very influential because they do not want to take care of themselves, the way to prevent it is to use PPE in accordance with the rules set"

"Nosocomial infection is a type of disease that is often encountered, especially in elderly people who have had a stroke, usually due to sleeping too long. Sometimes if the patient is not clean, the germs are easy to make an infection, sometimes also from the place where the infusion is placed, so it must always be monitored "

"I don't know much about nosocomial infections, maybe for prevention, I often clean the patient, wear gloves, and so on."

"Nosocomial infection is a disease that is acquired in the hospital, many things cause it, most often for example decubitus"

"It is an infection from the hospital, usually the result of poor hygiene"

"Infection from the hospital itself usually occurs after 3 days or more. "

"Nosocomial infection is not from outside, but from the hospital or health service, usually after 3 days or more"

"Infections that are more than 4 days and in the hospital, can he experience a UTI, the most frequent decubitus, prevention, always use PPE, follow all the standard procedures"

"The nosocomial infection was hospitalized, but I don't know what the process is."

From the above matrix, information is obtained that some informants know about nosocomial infections and how to prevent nosocomial infections. Some nurses are unable to explain what nosocomial infection is but can explain how to prevent nosocomial infections from occurring.



4.2. Knowledge of Nurses in Prevention and Control of Nosocomial Infection

Based on the results of in-depth interviews conducted with nurses at the UPTD Public Health inpatient Mandrehe, it was known that the knowledge of nurses was classified as good. However, there are still nurses who do not know what nosocomial infection is and how to prevent nosocomial infection.

According to Adtmaja (2012), knowledge is the result of a product of the education system and will gain experience which will later provide a level of knowledge or skills that can be done through training. Knowledge is obtained from the learning process, which can form certain beliefs.

The results of the interview show that knowledge is very influential on the behavior of nurses, where the knowledge that is owned can be applied to patients for the good of the patient itself. Lack of knowledge can lead to several undesirable things.

Broadly speaking, it is divided into 6 levels of knowledge, namely: Knowing, which means remembering a previously learned material. Comprehension, which means an ability to correctly explain a known object and be able to interpret the material correctly. Using (application), which means the ability to use the material that has been studied in real situations or conditions. Describe (analysis), namely the ability to describe a material or an object into components, but still within one organizational structure and still have something to do with one another. Summing up (synthesis), which means an ability to put or connect parts in a new whole form. Evaluate, which is the ability to assess material or object.

This is by Yunita's research (2015) where good knowledge will influence individual behavior and practices, the better the knowledge, the better one's practice of prevention and control of nosocomial infections.

Tables 1. Data Of Nurse Information

	Informants	Understant	
		Yes	No
1.	Poliknilik Nurse	√	
2.	Inpatient Nurse	√	
3.	Baby Room Nurse	√	
4.	Midwife Executive Room Midwifery	√	
5.	Laboratory Nurse		√
6.	Emergency Emergency Nurse	√	
7.	Polyclinic Office	√	
8.	Inpatient Room	√	
9.	Baby Room Room (Perinato)	√	
10.	Head of the Midwifery Room	√	
11.	Head of Laboratory Room		√
12.	Head of the Emergency Room	√	



4.3 Nursing Actions in the Prevention and Control of Nosocomial Infection

Based on the results of interviews and observations made, nurses' actions in preventing nosocomial infections were quite good in various aspects such as maintaining cleanliness, washing hands, using PPE, reporting to doctors if there were signs of infection, and keeping equipment clean to keep it clean and sterile. However, every aspect also has actions that are not by the appropriate library.

Nurses as nursing care providers are closely related to the occurrence of nosocomial infections because nurses are responsible for providing a safe environment for patients, especially in the PPI nursing process. So, nurses are at the forefront of efforts to prevent and control nosocomial infections (Potter and Perry, 2011).

From the results of observations of nurses' actions in preventing nosocomial infections, it can be caused by the length of work experience, nurses in Mandrehe Public Health Center are dominated by new nurses who have just been appointed to be the state civil apparatus.

In line with Mathuridy's (2015) research, it also shows that there is a significant relationship between the length of work and compliance with handwashing steps. Also, the results of research by Saragih and Rumapea (2010) state that there is a significant relationship between the length of work and compliance with handwashing at Columbia Asia Hospital, Medan.

According to Mulyatiningsih (2013), the working period is usually associated with the time to start working, where work experience also determines a person's attitude and performance, the longer the working period, the better one's skills and attitudes will be because they have adjusted to their job. A longer work period indicates more work experience for someone compared to other coworkers. A person's work experience determines how a nurse carries out his daily functions, because the longer the nurse works, the more skilled and experienced it will be in dealing with problems at work.

CONCLUSION.

Based on the results of research with in-depth interviews and observations, conclusions can be drawn:

The level of knowledge of nurses on nosocomial infections is relatively good, from 12 nurses 10 people have good knowledge about nosocomial infections.

The nature of nurses in controlling and preventing nosocomial infections is quite good, from 12 nurses 9 nurses provide information about personal hygiene and signs of nosocomial infection to patients and their families.

The actions of nurses in the prevention and control of nosocomial infections are good in various aspects.

- 8 nurses clean and maintain the cleanliness of the public Health
- 8 nurses use PPE while treating patients
- 9 nurses wash their hands before and after handling the patient

- 8 nurses report to the doctor if they find signs of infection

In the aspect of maintaining the equipment to keep it clean and sterile, there is very little, out of 12 nurses only 5 nurses keep the equipment clean and keep it sterile, this is due to a lack of sense of responsibility and also lack of socialization from the PPI team, causing the rules that have been in place. set is not ignored by the nurse and things happen that are very detrimental to the patient himself. Infection prevention controls that have been set are useless and hurt the performance and quality of services at the UPTD Mandrehe Inpatient Public Health.

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