

## Research Article

## Nursing Behavior Factors on Infection Prevention in the Inoperative Room of Meutia Langsa Hospital 2018

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**Abstract:** One indicator of success in hospital services is the low number of nosocomial infections or Health care Associated Infection (HAIs) in hospitals. Nosocomial infection is a major problem many hospitals facing, not only causing socio-economic losses, but also causing patients to stay longer in the hospital. This infection causes 1.4 million deaths every day around the world. This infection continues to increase from 1% in several European and American countries, to more than 40% in Asia, Latin America and Africa. The high number of nosocomial infections is an important problem in a hospital. One of the most important things in reducing the spread of nosocomial infections is by hand hygiene. The study aimed to determine the behavior of nurses on patient safety in conducting hand hygiene in the inpatient room of Langsa Cut Meutia Hospital in 2018. The study design used quantitative analytical surveys with crosssectional designs. The population was 47 nurses inpatient care at RSCM (National Center General Hospital) Langsa. The sampling technique uses the total population. Data analysis was performed by univariate, bivariate and multivariate analysis with chi\_square. From the results of multivariate analysis, it was found that the most influential factors in this study were attitude variables, where positive attitudes further increased compliance opportunities by 45, 681 times compared to negative attitudes. It is recommended for nurses to be more obedient in carrying out hand hygiene and increase knowledge and attitudes in carrying out hand hygiene actions.

**Keywords:** Knowledge, hand hygiene, Nurse Compliance.

### INTRODUCTION

Nosocomial infections often occur due to negligence in carrying out nursing actions in the service (Health Departement, 2018). One of the parameters of good health services in hospitals is the control of nosocomial infections ( Sembiring & Sianipar, 2018) The high number of nosocomial infections becomes an important problem in a hospital, if the patient's condition becomes worse then the length of time the patient's care will increase, it will be very detrimental to the patient and family because the longer the patient is treated the more the cost of care. ( Lelonowati, 2015) Patients and their families have the right to obtain optimal care and care (Health Departement, 2018).

Infection or what is now referred to as a health-related infection or Health-care Associater Infection (HAIs), some nosocomial infections may not cause death in patients, but this will be an important

cause for patients being treated longer in the hospital, nosocomial infections is a serious problem that is a direct or indirect cause of death of a patient (Pearson et al., 2006). This infection can be transmitted from patient to officer or vice versa, patients to visitors or vice versa, and between people who are in the hospital ( Boyce & Pittet, 2002). The danger of the occurrence of nosocomial infections is increased morbidity and mortality and can prolong the care of patients in hospitals and can affect the quality of hospital services ( Solomkin, 2017).

Based on Patient Safety Indicators (IPS), the hospital can determine efforts that can prevent unexpected clinical outcomes from occurring in patients. Prevention and control of infection is the biggest challenge in the order of health services. Increasing costs for dealing with infections related to

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health services is a big concern for patients and health care professionals ( Pearson, 2006).

One of the most important things in reducing the spread of nosocomial infections is by hand hygiene. Hand Hygiene is a practice for hand hygiene using antiseptic hand hygiene. WHO sparked the "global patient safety challenge with clean care is safe care, which is to formulate a strategy for implementing Hand Hygiene namely: doing hand hygiene before and after taking action in accordance with My Five Moments for Hand Hygiene is to do hand hygiene before touching patients, before perform a clean and sterile procedure, after coming into contact with the patient's body fluids, after coming into contact with the patient, after coming into contact with the environment around the patient (Boyce & Pittet, 2002).

According to the World Health Organization (WHO), hand hygiene (hand hygiene) is a term used to clean hands using antiseptic hand hygiene, either using liquid-based alcoholic antiseptic formulations (handrub) or using soap and water (handwash) ( Pearson et al., 2006).

Nurses have a considerable influence on the occurrence of nosocomial infections because nurses are health workers who have the most contact with patients and interact directly with patients for 24 hours ( Perry et al, 2018). Based on the results of interviews conducted by researchers to one of the head of the room inpatient hospital. Cut Meutia Langsa said that "in accordance with the results of my observation of the nurses of this space, indeed they did not always hand hygiene based on five moments. Most nurses here they do hand hygiene after contact with patients using handrubs, and sometimes there are nurses who do hand hygiene before take action on the patient. By conducting a preliminary survey, nurses do Handwash after taking action with patients (Shin & Park, 2018).

**METHODOLOGY**

The design of this study is an analytical survey with a cross sectional design where the independent and dependent variables will be collected at the same time (Budiarto, 2002). In the coss sectional design (cross section) researchers will look at the factors that influence nurse compliance in making hand hygiene before and after taking action at Langsa Cut Meutia Hospital. Samples are objects that are examined and considered to represent the entire population. The sample in this study is the total population, which is 47 people (total sampling). Data were analyzed using t-test parametric statistical tests in pairs using the help of SPSS software ( Budiarto, 2002).

**RESULTS**

Cut Meutia Medika Nusantara Ltd is one of the subsidiaries of PTPN\_1 who manages the health sector with its work unit, Cut Meutia Hospital, located at Jl. Garuda No.1, Kebun Baru, Langsa Baro District. This Hospital is a Referral Hospital from all Puskesmas in the Langsa City area, East Aceh Regency, Aceh Tamiang Regency, and every PTPN-1 plantation in the Aceh region with the classification of non-education type C Hospital.

**Overall Test**

Overall test is done to find out whether the independent variables together have a significant effect on the dependent variable.

**Table 1 Overall Test Result**

	<i>Chi-Square</i>	<i>df</i>	<i>Significant</i>
<i>Step</i>	32,886	2	0,000
<i>Block</i>	32,886	2	0,000
<i>Model</i>	32,886	2	0,000

Based on table 1 the overall test in this study is worth 0,000, where the significant value is calculated <0.05 (95% confidence level) so that it can be said that Ho is rejected, which means there is an independent variable that has a significant effect on the dependent variable.

**Partial Test**

Partial tests are conducted to determine the effect of each independent variable on the dependent variable partially.

**Tabel 2 Partial Test Result**

	<b>B</b>	<b>S.E.</b>	<b>df</b>	<b>P Value</b>	<b>OR Exp(B)</b>
Knowledge	2,850	1, 325	1	0, 032	17, 283
Attitude	3,822	1, 042	1	0, 000	45, 681
Constant	- 4,721	0, 440	1	0, 001	0, 009

Based on table 2 the value of p value for the knowledge variable is 0.032 where the value of the p value of the knowledge variable is <0.05, then Ho is accepted, which means that the knowledge variable has a significant effect on the compliance variable. The value of p value for the attitude variable is 0,000 where the value of the p value of the motivation variable is <0.05, so Ho is accepted, which means that the attitude variable has a significant effect on the compliance variable. Based on the results of this study the old ratio value of the knowledge variable is 17,283, which means that with the knowledge it can increase compliance by 17,283 times. The value of the attitude ratio old ratio is 45, 681, which means that with a positive attitude it can increase compliance by 45, 681 times compared to a negative attitude.

From the results above it can be concluded that the most influential factor in this study is the attitude variable, where positive attitudes further increase compliance opportunities by 45, 681 times compared to negative attitudes

**Pseudo R-Square**

Pseudo R-Square is conducted to determine the variation that occurs in the dependent variable (compliance) which can be explained by the independent variable (knowledge and motivation), while the others are caused by other variables not explained in this study.

**Tabel 3 Pseudo R-Square Result**

Step	-2 Log Likelihood	Cox & Snell R Square	Nagelkerke R Square
1	27,397	0,503	0,696

The results of the Pseudo R-Square value can be seen in table 3 in this study, the Pseudo R-Square value is 0.969, which means that the variations that occur in hand hygiene compliance can be explained by knowledge and attitude variables of only 69.6%, while others are explained by other variables.

**Hosmer and Lemeshow Test**

Hosmer and Lemeshow test is a test conducted to find out whether the independent variables we use (knowledge and attitude variables) are in accordance with empirical data or not.

**Tabel 4. Hosmer and Lemeshow Test Result**

Step	Chi-Square	Df	Sig.
1	0,109	2	0,947

In this study found a chi-square value of 3.288 with a probability value of 0.109. If the probability value is smaller or equal to the predetermined significance level ( $p \leq 0.05$ ) then  $H_0$  is rejected. In this study the probability results are  $0.109 > 0.05$ , then  $H_0$  is accepted, which means that the independent variables are enough to explain the data.

**DISCUSSION**

Based on the results of multivariate analysis of knowledge variables Attitudes, Availability of facilities and the Role of the Infection Control and Prevention Team (PPI Team) on the compliance of nurses 'hand hygiene at inpatient care at Langsa Cut Meutia Hospital there was a significant influence between knowledge and attitudes towards nurses' hand hygiene compliance. While based on the results of the study there was no significant influence between the availability of facilities and the role of the Infection Control and Prevention Team (PPI Team) on nurses' hand hygiene compliance. hygiene (Amiruddin, 2013).

Knowledge is something that can make someone know about an object, knowledge can be obtained based on experience and vision by the senses, thus knowledge is very important, with the knowledge it can provide broad insight to each individual and can apply it in certain situations (Notoadmodjo, 2011). The majority of nurses' knowledge in the inpatient care of Langsa Cut Meutia Hospital is good and the majority compliance in doing hand hygiene is also compliant, this is due to education factors and the length of time the nurses work so they are obedient in doing hand hygiene (Scott et al., 2007).

The most influential factor in this study is the attitude variable. with a positive attitude it can increase compliance by 45, 681 times compared to a negative attitude. In carrying out hand hygiene, it is actually an obligation and awareness of the health worker itself without any coercion from other parties.

Abraham Maslow also stated that attitude is based on a holistic dynamic theory based on the level of human needs. Individuals will be more satisfied if their physiological needs have been fulfilled and if these needs are achieved then the individual does not need to be motivated (Handel, 2017). According to Notoadmodjo, to improve one's attitude there are two methods, namely the direct method of giving material or non-material directly to meet needs such as giving bonuses or gifts, and indirect methods in the form of facilities or advice in an effort to improve hand washing ( Notoatmodjo, 2003). In accordance with the research conducted, the attitude of nurses in the inpatient care of Langsa Cut Meutia Hospital was negative because of lack of support from leaders or attention to the needs of nurses at Langsa Cut Lutia Hospital inpatient care so that nurses' attitudes were less compliant in doing hand hygiene.

Dengan demikian diharapkan kepada pihak rumah sakit Rumah Sakit Cut Meutia Langsa to give rewards to nurses in Langsa Hospital's inpatient Cut Meutia Hospital who are obedient in hand hygiene so that nurses' compliance in making hand hygiene increases and can reduce the incidence of nosocomial infections.

**COCLUSION**

Based on the results of multivariate analysis it was found that the most influential factor in this study was the attitude variable, where positive attitudes further increased compliance opportunities by 45, 681 times compared to negative attitudes.

## RESEARCH IMPLICATION

The results of this study have implications for the ability of nurses to know how nurse compliance is better and is expected to be implemented when providing services to patients. This is also a reference for nurses to be able to increase work motivation and revise knowledge by attending each training to improve nurses' knowledge at work. Besides this, the implications of the results of this study can also increase better knowledge for nurses, especially nurses who work in Langsa Cut Meutia Hospital, can change the attitude of nurses towards a more positive way of doing hand hygiene with full awareness and without coercion, pay attention to what must be prepared especially the availability of hand hygiene facilities so as not to hinder the process of implementation and the implementation of supervision of the Infection Control and Prevention Team (PPI Team) with a routine schedule as well as guidance in the form of input that makes nurses always take hand hygiene actions at Cut Meutia Hospital Langsa.

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