

# Evaluation of Urinary Catheter Installation Capability on Nurses in Order to Increase Patient Safety in Pku Bantul Hospital

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## Abstract

**Background:** the vulnerability of Patients exposed to the infection or urinary tract infection with many mounting procedures and actions that are done either urine catheter to help diagnose or monitor diseases and therapeutic journey. Urinary tract infection of post installation of the catheter can be dangerous to life because it can continue on septicemia and ends at death. A nurse who was the spearhead health services in hospitals should always implement patient safety in any nursing care should do according to the SOP hospital. Included in the installation of urine catheter to prevent infection. **Research methods:** this research is a descriptive cross sectional study of non-analysis methods. The approach was conducted with a quantitative and qualitative approach (mix method). The aim is to know the ability of nurses in the catheter in an effort to increase patient safety in PKU Muhammadiyah Bantul Hospitals. **Results:** The majority of nurses (71,43%) already have knowledge with high category for installation of urine catheter. While 64,29% of nurses had a good attitude towards the installation of urine catheter. For the behaviour of the nurse, the nurse has a behavior 57,14% good SOP. **Conclusion:** Most of the nurses have a high level of knowledge about the installation of the urinary catheter, attitude, and good behavior in the performance installation of urine catheter. In its entirety can help increase patient safety in PKU Muhammadiyah Bantul Hospital.

**Keywords:** Urinary Catheters, Urinary Tract Infections, Patient Safety

## INTRODUCTION

The Institute of Medicine (IOM) mention for safety in the delivery of health showed that "the patient should be safe from accidents caused by service system". According to the Committee on quality of health care in America, the majority of medical errors and quality problems occur because of a lack of fundamental ways to care, not individual or negligence.

On a national scope, since August 2005, the Minister of Health of Indonesia has announced a "Gerakan Nasional Keselamatan Pasien (GNKP) Rumah Sakit (RS)", then KARS (Komite Akreditasi Rumah Sakit) of Ministry of Health of Indonesia also compiled a Standard KPRS (Keselamatan Pasien Rumah Sakit) that is inserted into the instrument of Hospital accreditation (2007 version) in Indonesia. <sup>1</sup>

Patient safety has become a serious concern. From her research towards inpatients in 15 hospitals with 4,500 medical record shows a very varied KTD figures, that is 92,2% to 8.0% for diagnostic error and 4.1% to 91,6% for medication errors. <sup>2</sup>

Organizing the nursing services in order to achieve the goal, needed a set of instructions or steps activities are standardized to meet the specific needs of the patient, the activity steps are Standard Operational Procedures (SOP). General purpose standard operational procedure is to direct the activities of the perawat in order to achieve the goal of an efficient and effective so that consistent and secure in order to improve the quality of service through the fulfillment of the applicable standards. <sup>3</sup>

In an act of nursing, nursing services standard is very helpful to achieve quality care, in addition to the standard can also maintain safety, so that nurses have to think realistically about the importance of a systematic evaluation of all aspects of the care of a high quality. But its success depends on the nurses themselves. The success in the implementation of hospital operational standards of nursing practice procedure must be supported by the existence of various systems, facilities, facilities and other supporters who are in the hospital. <sup>4</sup>

One of the factors that influence nurse in nursing actions to take decisions that are logical and accurate knowledge of nurses. Basic knowledge of good nurses associated with the safe nursing care. Increased

knowledge of nurses about patient safety will have an impact on improving the quality of nursing services.<sup>5</sup>

Installation of urine catheter is the Act of nursing by means of inserting a catheter into the bladder through the urethra that aims to help meet the needs of elimination and as taking the examination materials).<sup>6</sup> Vulnerable patients exposed to infection or urinary tract infection with many mounting procedures and actions that are done either urine catheter to help diagnose or monitor diseases and therapeutic process.

Installation of the dower catheter has impact on the 80% occurrence of urinary tract infections. The risk of urinary tract infections is estimated at about 5% per day and 4% of these infections cause bacteremia as well as improved injury urethra and hematuria.

Nosocomial urinary tract infection can be caused by several factors, namely factor hospes (receiver), the agent of infection (germs or microorganisms) factors, the duration or the old installation and procedure (installation and equipment).<sup>7</sup>

Monitoring and evaluation is an essential part of an effective quality service in a hospital. In order to put forward quality, PKU Muhammadiyah Bantul Hospital realized the importance of a culture of patient safety in the whole scope of hospital infection prevention in order.

PKU Muhammadiyah Bantul Hospital in currently still continue to make efforts for the enhancement of a culture of patient safety, this is a challenge both the Government and the hospital management particularly PKU Muhammadiyah Bantul. A nurse who was the spearhead health services in hospitals should always implement patient safety in any nursing care should do according to the SOP.

Based on that case, this research aims to know the ability of nurses in installation the dower catheter as improvement of patient safety in the PKU Muhammadiyah Bantul Hospital. More specifically, the specific purpose of this research is to know the level of knowledge, attitudes, and behavior of nurses in the urinary catheter.

This research is a crossed-sectional descriptive non analysis. The approach is used that is quantitative and qualitative approaches (mix method). Research conducted at the PKU Muhammadiyah Bantul Hospital. The population in this study are all the nurses who work in PKU Muhammadiyah Bantul Hospital. While the sample is a nurse at the Emergency Unit of the hospital.

The data collected with a detailed interview techniques, questionnaire, and observations.

## RESEARCH RESULTS

### Frequency Distribution Of The Respondents Knowledge

Distribution trend the frequency in each class interval can be seen in the following table:

**Table. 1**  
**The Frequency Distribution Of Respondents Knowledge Level**

Knowledge	Frequency	Percentage (%)
High	10	71,43
Mid	4	28,57
Low	0	0
Total	14	100

Source: Primary data, processed

The results of the analysis have been presented in table.1 shows that most nurses at Emergency Room of PKU Muhammadiyah Bantul Hospital has high knowledge about installation of urine catheter. A nurse who still have knowledge are in the urine the catheter just 4 people nurse (28,57%).

### Frequency Distribution Of The Respondents Attitude

Distribution trend the frequency in each class interval can be seen in the following table:

**Table.2**  
**The Frequency Distribution Of Respondents Attitude**

Attitude	Frequency	Percentage (%)
Good	9	64,29
Bad	5	35,71
Total	14	100

Source: Primary data, processed

The results of the analysis have been presented in the table 2 shows that the majority of nurses in the emergency installation of PKU Muhammadiyah Bantul Hospital has a good attitude about the installation of catheter urine. Nurses who have a bad attitude about urine catheter installation there are 5 nurse (35,71%).

### Frequency Distribution Of The Respondents Behavior

The data of behavior of nurses on this research obtained through observation. Observation of 14 nurses PKU Muhammadiyah Bantul Hospital. While the observer in this case is 8 doctors remained on duty in RSU PKU Bantul. Distribution trend the frequency in each class interval can be seen in the following table:

**Table. 3**  
**Frequency Distribution Of The Respondents Behavior**

Behaviour	Frequency	Percentage (%)
Good	8	57,14
Bad	6	42,86
Total	14	100

Source: Primary data, processed

The behavior of nurses in the pairing of urine in the catheter RSU PKU Bantul largely has been done, but it hasn't been completely done in accordance with SOP.

### The Ability of Nurses to installation of urine catheter in PKU Muhammadiyah Bantul Hospital

The ability of nurses in the urine catheter in PKU Muhammadiyah Bantul Hospital on research done with in-depth interviews of some nurses at Emergency Unit, including head of the Emergency Unit. Based on the results of interviews with some respondents based on the previous description, it can be concluded that the culture of patient safety still needs to be improved in the execution of the installation of catheter urine.

Associated with knowledge about the installation of catheter urine, a majority of respondents in this regard has been able to explain it well. Including regarding SOP urine catheter installation set PKU Muhammadiyah Bantul Hospital. In this case the nurse can memorize, even though in outline only.

Based on in-depth interviews with some respondents can be seen in the following table:

**Table . 4**  
**The Overall Results Of The In-depth Interviews Matrix**

Respondent	Knowledge	Attitude	Behaviour
Head of Emergency Unit	Good	Less Good	Good
Chief of Nurses team	Good	Good	Good
Nurse I	Good	Good	Good
Nurse II	Good	Good	Good

Source: Primary data, processed

Based on the description, it was concluded that most of the respondents had the knowledge, attitudes, and behaviors that are either in the urine catheter.

## DISCUSSION

### Evaluation of Nursing Knowledge in the Urine the catheter in the Patient Safety Improvement Efforts

Urine catheter installation knowledge is very important realize the successful implementation of the safe patient service. With the knowledge that it will not pose a high or can minimize risk due to mistakes or omissions of nurses. The results of the data analysis gives results that nurses who have high knowledge as much as 71,43%, nurses who have knowledge are as much 28,57%, and no nurses who come with low knowledge. It can be concluded that knowledge of nurses in the emergency installation on the installation of a catheter in the good category.

This is in accordance with the results of the research show that most respondents were able to elaborate on his understanding of the related processes and the purpose of the installation of catheter urine. The knowledge of the respondents are still limited to know step SOP catheter installation of urine. In this case, the respondent has not been able to memorize and apply urine catheter installation in accordance with the basic principle only.

Increased knowledge of nurses about this urine catheter installation is very important. First, with regard to the prevention of the risk of infection as part of the effort of realizing patient safety. The program increased knowledge of nurses in putting up proper urine catheter can be part of the program of patient safety. Patient safety program was expected to be able to prevent the occurrence of injuries caused by mistakes nurses in carrying out of actions installation of urine catheter.

### **Evaluation of the attitude of the nurses on the installation of Urine Catheter in an effort to Increase Patient Safety**

The attitude of the respondent's response was both positive and negative towards the installation of katerter the urine. Based on the analysis of research data delivers results that 64,29% of nurses as respondent has a good attitude. Nurses who have a bad attitude there is 35,71%.

### **The evaluation of the behaviour of the Nurse in the Urinary Catheter in the Patient Safety Improvement Efforts**

The behavior in this research is an activity in the urine catheter. Behavior was assessed from the stages performed starting from the preparation phase, stage interaction, stage, stage work orientation, and the termination phase. Good behavior if the nurse did the whole stage of the installation process urine catheter. Conversely, if the stages are not done in the catheter then indicates the behavior.

Observation results against nurse in critical installation space darut RSU PKU Bantul, the majority of the respondents have a good behavior. As many as 8 57,14% or those nurses in this case shows the behavior of the installation of urine catheter is already good because it fully appropriate the SOP. While 6 42,86% of respondents observation results of catheter urinnya mounting behavior is not fully in accordance with the SOP.

On the other hand, is seen in this regard that the provisions in the basic installation of urinary catheters have been implemented well. This is evidenced by the high value of the results of observation for stage preparation tools, interaction, and stage work. In addition, the fulfillment of the catheter Assembly care bundles of urine to prevent urinary tract infections also be proof.

Achievement of patient safety is a shared responsibility of all components in the hospital. Components of a hospital determines how good service and quality of the hospital. 9, therefore, is not only the knowledge, attitudes, and behavior of nurses who have to be constantly improved. Systems and policies in the Organization of the hospitals themselves should also support and lead to the attainment of patient safety.

### **Identification of factors influencing the achievement of patient safety in the Urinary Catheter**

Based on the results of research, the existence of a number of factors known to be associated with prevention of infection in patients, they are:

1. Procedure Factor, relating to the installation of a urinary catheter SOP that has not been fully executed according the provisions of baku by nurses.
2. The Human Resource Factor, realating to the existence of training yet routine to improve nursing skill of fitting catheter urine.
3. Teamwork Factor, relating to the still low level of communication between nurses in the execution of the task of fitting catheter urine.
4. Reporting Mechanisms and evaluation Factors relating to the mechanism of reporting unwanted events have not drafted clearly.

Based on the above factors drawn up some recommendations and plan of action that can be done to improve patient safety PKU Muhammadiyah Bantul Hospital on installation of catheter:

Problems Identification	Action	Level Recommendations (Individual, Team, Hospitals Management)	Responsible of	Input	Indicator of Success
SOP is too long and difficult to remember	revised sentence per sentence SOP into fuller	Hospitals Management	The Head of Hospital	Human Resources	The nurse understands and can memorize SOP
	Sosialization of SOP	Hospitals Management	The Head of Hospital	Human Resources , Fund	The nurse can implement the SOP
Limited Human Resources skills	Training installation of catheter for nurses	Individual	The Managerial Chief of Nurses	Trainer, Target Training , Fund	Evaluation of skills shows good values
	The standard assessment of the skills of nurses routinely and periodically	Individual	The Managerial Chief of Nurses	Fund, Assesor Team, Assesment Instruments	There are evaluation regularly and periodically
less teamwork	Giving a briefing on the importance of cooperation and communication between the team in working	Team	The Managerial Chief of Nurses	All Nurses	There is no reporting of KTD
There is no mechanism for reporting and evaluation of KTD	Create a policy of reporting systems and the evaluation of KTD	Hospitals Management	The Head of Hospital	Human Resources	The entire head nurse reporting KTD periodically to the managerial chief of nurses

Based on the above data that installation of urine catheter in patients vulnerable to infection due to the large number of results in the procedures and actions performed urine catheter installation. 10 risk of infection will certainly increase if the installation process urine catheter is not done properly. Therefore, any HR related to urinary catheters in the installation process must be able to ensure that the process takes place exactly so that patient safety could be guaranteed.

As already outlined in the previous section, that the achievement of patient safety in the urine catheter in PKU Muhammadiyah Bantul Hospital still contain some problems. Mainly related to the still to SOP the urine catheter installation has not been carried out.

An attempt of training can be done along with the standard assessment of the ability of nurses. On the other hand, teamwork is also expected to contribute to the improvement of the ability of nurses in a group. System policy reporting and evaluation over the incident is not expected in the urinary catheter can be a means to prevent a similar occurrence in the future.

## CONCLUSION

Based on the results of research in PKU Muhammadiyah Bantul Hospital, some things can be summed up as follows:

1. Most nurses have the ability either to attach catheter urine.
2. Most nurses have a high level of knowledge about the installation of urine catheter. Level of knowledge of the nurse helps the patient safety improvement efforts in PKU Muhammadiyah Bantul Hospital.
3. Most nurses have a good attitude about the installation of the catheter. This helps increase patient safety in PKU Muhammadiyah Bantul Hospital.
4. Most nurses have good behavior in the performance installation of urine catheter. The results showed that a single provision of SOP that has not been applied is the use of perlak when mounting the catheter urine. Therefore, the overall behaviour of the nurse helps the patient safety improvement efforts in PKU Muhammadiyah Bantul Hospital.

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