

Strategy Analysis of Phlebitis Prevention and Urinary Channel Infections Caused by Catheters at Royal Prima Public Hospital in 2019

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ABSTRACT

Urinary tract infections and phlebitis are the most common infections, the prevalence is still quite high even though morbidity and mortality are still in a low limit but it causes complications of infection and death. The purpose of this study is to determine strategies for preventing phlebitis and urinary tract infections caused catheter at the Royal Prima General Hospital in 2019. This type of research uses a Qualitative method by conducting in-depth interviews and observations; the study was conducted in August 2019. The populations of this study were 10 nurses in the inpatient room at the Royal Prima General Hospital in July until August 2019. The results showed that nurses hospitalized at Medan Royal Prima Hospital in 2019 had prevented phlebitis and urinary tract infections caused by catheters by installing infusions and catheters in accordance with operational standards at Royal Prima Hospital. It is expected that Royal Prima General Hospital will conduct training on prevention and control of nosocomial infections so that all nurses are able and understand about the prevention of phlebitis and urinary tract infections caused by catheters and conduct monitoring and evaluation in all treatment units.

Keywords: Strategy Analysis, Prevention, Phlebitis, Urinary Tract Infection caused by a catheter.

INTRODUCTION

Nosocomial infection or Health Care-Associated Infection (HCAI) is an infection that occurs as long as the patient is served in a health facility, where there are no signs of infection or symptoms of the patient being incubated at the time of hospital admission (WHO 2015).

According to WHO, HAIs are infections acquired by patients during treatment procedures and medical actions in health services that occur ≥ 48 hours of treatment and ≤ 30 days after leaving a health facility. Based on the French National Prevalence Survey, the locations where nosocomial infections often occur include the urinary tract, airway, surgical wounds, skin and tissue, ears, nose and throat, eyes, catheter insertion locations and infusion locations (WHO, 2011).

Law Number 44 of 2009 concerning Hospitals states that hospitals are required to apply patient safety standards. The Patient Safety Program is to ensure patient safety in the hospital by preventing errors in the delivery of health services. Hospitals are required to provide quality and transparent health services to the public, especially for ensuring patient safety, so that hospitals need to improve the quality of service, especially in the prevention and control of nosocomial infections (Ministry of Health, 2010).

Research by Wanti, et al. (2016) states that the most frequent infection in hospitals is phlebitis, which is inflammation of the veins due to infusion. Intravenous therapy or commonly known as infusion therapy is an effective method for supplying fluids, electrolytes, drugs through the blood vessels (intravascular). Fluid and electrolytes enter the body through food, drinks and intravenous fluids which are distributed to all parts of the body (Wilson, 2006).

Urinary tract infection is one of the most common types of infection after phlebitis. Urinary tract infections in Indonesia and their prevalence are still quite high, according to estimates by the Ministry of Health of the Republic of Indonesia, the number of UTI sufferers in Indonesia is 90-100 cases per 100,000 population per year or around 180,000 new cases per year (Depkes RI, 2014). Urinary tract infection associated with catheters is considered relatively low compared to other nosocomial infections; the high prevalence of urinary catheter use causes a large incidence of infection resulting in infectious complications and death.

Based on the results of observations made by researchers at the Royal Prima Hospital on the incidence of infection in the field, there were still cases of phlebitis and urinary tract infections caused by catheters. This happened by several factors, namely patient safety, skills, motivation, length of work and the role of the manager.

LITERATURE REVIEW

Analysis

Analysis is the activity of thinking to describe a subject into parts or components so that the characteristics or marks of each part can be identified, then the relationship to each other and the function of each part of the whole.

SWOT analysis

SWOT analysis is the systematic identification of various factors to formulate a company's strategy. This analysis is based on logic that maximizes strengths and

opportunities, but simultaneously minimizes weaknesses and threats. The strategic decision-making process is always related to the development of the company's mission, goals, strategies and policies. Thus, strategic planning must analyze the company's strategic factors (strengths, weaknesses, opportunities and threats) in the current conditions Rangkuti (2014).

Strategy

Strategy is the determination of the company's long-term goals and objectives, the implementation of actions and the allocation of resources needed to achieve predetermined goals (Chandler, 1962).

Strategy Management

Strategy management is defined as an art and science for formulating, implementing, and evaluating cross-functional decisions, so that organizations can achieve organizational goals (David, 2013).

Prevention

According to the Big Indonesian Dictionary (2017), prevention is a process, means, action to prevent or act to prevent something from happening. Thus, prevention is an action. Prevention is synonymous with behavior.

Phlebitis

Phlebitis is one of the nosocomial infectious diseases, where nosocomial infection is an infection that is acquired or experienced by the patient while he is hospitalized and shows symptoms of a new infection after 72 hours the patient is in the hospital and the infection is not found or suffered when the patient is hospitalized, admitted to hospital (WHO, 2012).

Urinary Tract Infection

Urinary tract infection is an infection due to the presence of microorganisms in the urine and has the potential to invade the tissues in the urinary tract. Urinary tract infection depends on many factors such as age, gender, prevalence of bacteriuria and predisposing factors that cause changes in the structure of the urinary tract including the kidneys. Under normal circumstances, urine also contains microorganisms,

generally around 102 to 104 bacteria / ml urine. The patient is diagnosed with a urinary tract infection if the urine contains

more than 105 bacteria / ml. Coyle et al, (2015).

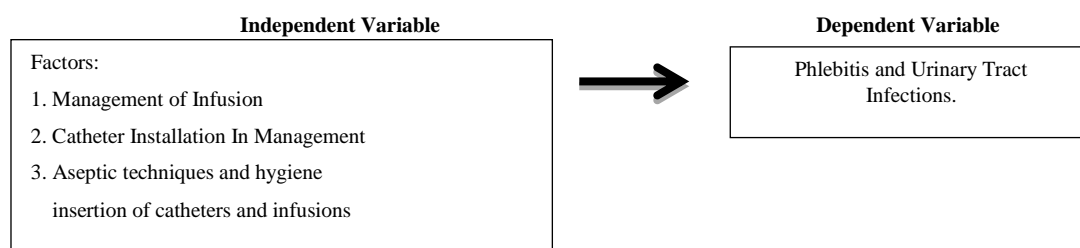


Figure 1: Conceptual Framework

Hypothesis

Based on the research background and the relationship between variables, the research hypothesis:

Ho 1. There is no relationship between management of infusion and phlebitis in Royal Prima General Hospital.

2. There is no relationship between catheter placement and management of urinary tract infections at Royal Prima General Hospital.

3. There is no relationship between aseptic techniques and hygiene against urinary tract infections and phlebitis at Royal Prima General Hospital.

Ha 1. There is a relationship between infusion management with phlebitis in the Royal Prima General Hospital.

2. There is a relationship between catheter placement in the management of urinary tract infections at Royal Prima General Hospital.

3. There is a relationship between aseptic techniques and hygiene against urinary tract infections and phlebitis at Royal Prima General Hospital.

MATERIAL AND METHODS

This research is a qualitative research method which is intended to obtain in-depth information about the ability of nurses to prevent and analyze strategies for preventing phlebitis and urinary tract infections caused by catheters at Royal Prima Hospital. 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.

Population is a generalization area consisting of objects / subjects that have certain quality and quantity as well as characteristics that are determined by the researcher to be studied and then draw conclusions. The population in this study were all nurses in Class 3 inpatient Royal Prima Hospital, amounting to 10 people. The sample is part of the population that is the actual source of data in a study. (Sugiyono, 2013). Then Arikunto, (2002) said that the sample is part or representative of the population studied. The sample in this study was using random sampling, amounting to 10 people.

Data collection techniques can be obtained, among others, Primary data, namely data obtained logically directly from research informants through the observation, interview and questionnaire stages given to informants, interviews with informants are carried out with the consideration that informants can provide data and information that is expected to answer the problem being researched. Secondary data is data obtained through searching written sources such as books, literature, research reports that are relevant to the title of the research being studied.

The data analysis technique in this study follows the steps proposed by Bungin (2014), namely by collecting data (Data Collection), namely the data collection activities in this study using in-depth interviews and documentation. Data Reduction, which is carried out since data

collection starts by making a summary, writing memos, etc. with the intention of setting aside irrelevant data / information. Display Data, namely the presentation of qualitative data presented in the form of narrative text. The presentation can also be in the form of matrices, diagrams, tables and charts. Verification and Confirmation of Conclusions (Conclusion Drawing and Verification).

RESULTS AND DISCUSSION

Performing Hand Hygiene

Based on the results of in-depth interviews, it was found that only 7 out of 10 nurses at the Royal Prima Medan Hospital had good skills in maintaining hand hygiene. However, there are still 3 nurses who sometimes forget the stages and obligations of washing hands, although from the results of document observations it can be seen that guidelines and SPOs related to hand hygiene are actually available in each installation / section, including the WHO hand-washing pictures that have been attached to each hand washing place.

Even according to the head of the room and the PPI team, a direct response has been carried out to the nurse administrators every day. This may be because the three implementing nurses have only worked for 1-2 years in the hospital, so they are still lacking experience, and most of them are fresh graduate nurses who have just worked at the hospital.

According to Effendi's (2011) research, efforts carried out such as hand hygiene have been carried out and are trying to achieve the intended goals.

Based on the results of observations, it turns out that only 7 nurses have carried out 6 steps and 6 times of washing hands according to the procedure, in addition to the length of work, the biggest obstacle to implementing the 6 steps of washing hands is the busyness faced by each nurse and the lack of human resources.

It is also in line with the WHO statement (2015) that washing hands is often not optimal. This is due to the lack of

appropriate equipment, the high ratio of the number of nurses to patients, and the lack of knowledge of nurses.

Using Complete APD

Based on the results of in-depth interviews, it is known that in using APD, 6 out of 10 nurses at the Royal Prima Medan Hospital already know the types of APD and how to use it. From the documentation study, it was also found that the SPO for the use of APD in each installation / section already exists. From the observation, 6 out of 10 nurses have used APD properly and correctly. However, there are still 4 nurses who have not maximally used APD such as gloves and masks.

Wilma (2016) also states that the better management support in providing facilities and infrastructure, the better infection prevention implementation will be. According to the researchers' assumptions, this is due to nurses' fear of using resources in the hospital. Nurses fear harming the hospital if they wear a lot of APD. Several other obstacles were that the nurses felt uncomfortable with the APD provided, especially the gloves because they were too thin and tore easily and the size of the gloves was too big.

The Installation Area Is Supported Sterile

Based on the results of in-depth interviews, it is known that in the infusion of the installation area given sterile duk, 5 out of 10 nurses at the Royal Prima Medan Hospital have done this. However, there are still 5 nurses who have not maximally used sterile duk.

MS (2016) also states that each instrument that is sterilized must be kept in its proper place in order to facilitate the time when the action is to be carried out.

Some other obstacles are that nurses feel that sterile duk is sometimes not available on the storage trolley, and there are still nurses who forget to use the sterile duk during infusion.

Skin Cleansing Using Povidone Iodine

Based on the results of in-depth interviews, it is known that in using povidone iodine, 8 out of 10 nurses at the Royal Prima Medan Hospital have used povidone iodine and how to use it. From the observations, 8 out of 10 nurses have used povidone iodine properly and correctly.

Siswandono (2016) also states that as we know iodine has antiseptic properties, but to use excessive iodine can inhibit the wound granulation process.

Some other obstacles are that nurses feel that the use of alcohol swab and povidone iodine is the same, and to use povidone iodine too makes their job less efficient in using it.

Tools Used Sterile

Based on the results of in-depth interviews, it is known that in using sterile equipment, 10 out of 10 nurses at the Royal Prima Medan Hospital have used sterile equipment. From the observations, 10 out of 10 nurses have used sterile tools properly and correctly.

MS (2016) also stated that the management of medical devices is carried out by means of sterilization and disinfection using a microwave in the CSSD room after which they are stored in a sterile place.

Suitable Installation Location

Based on the results of in-depth interviews, it is known that in choosing a suitable installation location, 10 out of 10 nurses at the Royal Prima Medan Hospital are competent to determine the appropriate installation location. From the results of observations 10 out of 10 nurses have been able to determine the location of the infusion properly and correctly.

Bare (2002) also states that one of the good procedures for infusion is to hold the vein access device by hand to help the vein to be more stable.

Some other obstacles are that the nurse finds it difficult if children are given the infusion because they move too much so

that repeated stabbing can occur. So that nurses need the help of another nurse.

Installation As Indication

Based on the results of in-depth interviews, it is known that in carrying out the catheter insertion as indicated, 10 out of 10 nurses at the Royal Prima Medan Hospital are competent to insert the meter according to the indication. From the results of observations 10 out of 10 nurses have been able to carry out catheter placement properly and correctly and according to indications.

Bare (2012) also states that catheterization can be a life-saving procedure especially if the urinary tract is blocked or the patient is unable to urinate. Catheterization can also be used to determine changes in the amount of residual urine in the bladder after the patient has urinated.

Using Complete APD

Based on the results of in-depth interviews, it is known that in using APD, 7 out of 10 nurses at the Royal Prima Medan Hospital already know the types of APD and how to use it. From the documentation study, it was also found that the SPO for the use of APD in each installation / section already exists. From the observation results, 7 out of 10 nurses have used APD properly and correctly. But there are still 4 nurses who have not maximally used APD such as gloves and masks.

Wilma (2016) also states that the better management support in providing facilities and infrastructure, the better infection prevention implementation will be. Some other obstacles are that nurses feel uncomfortable with using APD due to busy time due to their own work so they often forget to use APD.

Tools Used Sterile

Based on the results of in-depth interviews, it is known that in using sterile equipment, 10 out of 10 nurses at the Royal Prima Medan Hospital have used sterile

equipment. From the observations, 10 out of 10 nurses have used sterile tools properly and correctly.

MS (2016) also stated that the management of medical devices is carried out by means of sterilization and disinfection using a microwave in the CSSD room after which they are stored in a sterile place.

Performing Hand Hygiene

Based on the results of in-depth interviews, it was found that only 9 out of 10 nurses at the Royal Prima Medan Hospital had good skills in maintaining hand hygiene. However, there is still 1 nurse who sometimes forgets the stages and obligations of washing hands, even though from the results of document observations it can be seen that guidelines and SPO related to hand hygiene are actually available in every installation / section, including the WHO hand washing picture has been attached to every hand washing place.

Even according to the head of the room and the PPI team, a direct response has been carried out to the nurse administrators every day. This may be due to the fact that these nurses have only been working for 1-2 years in the hospital, so that they have less experience, and most of them are fresh graduate nurses who have just worked at the hospital.

According to Effendi's (2011) research, efforts carried out such as hand hygiene have been carried out and are trying to achieve the intended goals.

This is also in line with the WHO statement (2015) that washing hands is often not optimal. This is due to the lack of appropriate equipment, the high ratio of the number of nurses to patients, and the lack of knowledge of nurses.

Immediately Remove If Not Needed

Based on the results of in-depth interviews, it was found that 10 out of 10 nurses at the Royal Prima Medan Hospital had good skills in determining the time to remove the catheter if it was not needed.

According to research by Bayuningsih (2011), the catheter is removed within 7 days for a Foley catheter to prevent the capacity of urinary tract infections caused by bacteria.

Filling the catheter balloon according to the instructions

Based on the results of in-depth interviews, it was found that 9 out of 10 nurses at the Royal Prima Medan Hospital had good abilities in filling catheter balloons according to the instructions.

According to Bayuningsih's (2011) study, the installation of a catheter balloon according to the instructions is 5-20cc depending on the capacity of the catheter balloon itself.

Some other obstacles are that the nurse still forgets the exact amount of fluid that will be put into the catheter balloon due to inexperience as a nurse and unfamiliar.

Fixation of Catheters with Plaster

Based on the results of in-depth interviews, it was found that 10 out of 10 nurses at the Royal Prima Medan Hospital had good skills in fixing catheters with plaster.

According to research by Bayuningsih (2011), if the catheter is already installed, it can be reattached using a plaster to prevent tension between the patient and the catheter, and the plaster used must be replaced frequently to keep it clean.

Urine Bag Hanging Does Not Touch The Floor

Based on the results of in-depth interviews, it was found that 10 out of 10 nurses at the Royal Prima Medan Hospital had good abilities in hanging catheters not touching the floor.

According to research by Bayuningsih (2011), if the catheter is already installed, it can be hung next to the patient's bed to make it easier for the patient to move and prevent infection caused by bacteria.

Effect of Aseptic Techniques and Hygiene of Catheter Installation

Based on the results of in-depth interviews, it was found that 10 out of 10 nurses at the Royal Prima Medan Hospital had good skills in performing aseptic techniques and hygiene catheter placement.

According to research Sumaryono (2015) in developing countries the high incidence of nosocomial infections is due to lack of supervision, poor preventive practices, inappropriate use of limited resources.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

Based on the results of the study, the following conclusions were drawn that for the ability of nurses to analyze strategies for preventing phlebitis and urinary tract infections at Royal Prima Hospital, it was known that:

1. In performing hand hygiene from the results of in-depth interviews, 7 nurses were classified as good. From the observation, the nurse has the ability to do it maximally
2. In using complete PPE, from the results of the in-depth interviews, the ability of 6 nurses who used PPE was good.
3. In installing a large duksteril in the installation area from the results of in-depth interviews with the abilities of 5 nurses who are indeed supporting in the installation area.
4. In giving povidone iodine to the installation area from the results of in-depth interviews, the ability of 8 nurses who gave povidone iodine was good.
5. In using sterile equipment, from the results of in-depth interviews, the ability of 10 nurses is classified as good and can determine what actions require sterile equipment.
6. In choosing the appropriate installation location from the results of in-depth interviews, the ability of 10 nurses was classified as good and in accordance with the theory.

7. In the catheter placement according to the indication according to the results of the in-depth interview, the ability of 10 nurses is quite good in determining the right time to use the catheter.
8. In removing the catheter if it is not needed according to the results of the in-depth interview, the ability of 10 nurses is quite good in removing the catheter if it is no longer needed according to the indication.
9. In filling the catheter balloons according to the instructions according to the results of in-depth interviews, the abilities of 9 nurses are quite good but there is still 1 nurse who still forgets about the amount of fluid to be filled according to theory.
10. In fixing the catheter with a plaster according to the results of in-depth interviews, the ability of 10 nurses is classified as good in performing good fixation.
11. In hanging urine bags not touching the floor according to the results of in-depth interviews, the ability of 10 nurses is quite good because they hang urine bags properly to prevent urinary tract infections.

Recommendations

Researchers' suggestions from research that have been done are as follows:

1. To the Hospital

- a. In order to immediately conduct training on prevention and control of nosocomial infections for nurses who have never attended training and reforming PPI related materials to nurses who have attended training gradually until finally all nurses are able to understand about preventing phlebitis and urinary tract infections caused by catheters.
- b. In order to immediately meet the shortage of human resources for nurses in accordance with the workload needs of each installation / division.

- c. Hospital management and the PPI team are advised to conduct monitoring and evaluation of infection prevention and control in all care units.
- d. Monitoring the implementation of the SPO in every action by the nurse is carried out.

2. To Advanced Researchers

- a. The number of respondents in further research should be more so that they can represent all executors in the room.
- b. So that further research should assess the prevention strategies of phlebitis and urinary tract infections from the patient's perspective.

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