

EVALUATION OF CONTROL OF NOSOCOMIAL INFECTIONS PHLEBITIS IN MAWAR MERAH PUTIH RSUD KABUPATEN SIDOARJO

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Abstract

Based on this kind of research was case study in the form of summative evaluative and quantitative methods to evaluate the implementation of SOPs (Standard Operating Procedures) "Installation Infusion" and impact evaluation that assesses whether the input, process, and output was in conformity with the SOP and Kepmenkes Standards and their implementation impact desired the nurse and the patient was not going phlebitis, where there were signs: redness, wake the study was cross-sectional study in which only the fever/ heat, pain, swelling, or skin dermaged. The purpose of this study was to evaluate the implementation of SOPs Control of Nosocomial, especially the installation Infusion of Phlebitis Genesis in MawarMerahPutih RSUD KabupatenSidoarjo in June 2013 at the nurse put the IV needle, sample was total population and arranged recommendations for the control of nosocomial infections in RSUD Kabupaten Sidoarjo to fit standard. Results of research, recording in book ICN value was very less on April, Active supervision ICN (Nurse Supervisor Infection) in room 100% of respondents said inactive; There was relation SOP implementation with level of education 68,42%, the best was D3 Nurse; There was relation SOP implementation with sex, the best was women, ie 60,87%; There was relation SOP implementation with the length of employment, the best of the length of employment > 2 to < 5 years, ie 76,47%; There was relation SOP implementation with the age, the best was at age > 25 to < 30 years, ie 63,64%; There was relation SOP implementation with Flebitis.SOP was not implementation, ie 100% Flebitis. Incidence of phlebitis research 3,33%; Incidence of phlebitis in January to June 2013 average of 6,58%, above the standard of quality control in RSUD Kabupaten Sidoarjo (2,5%) and Kepmenkes 270/MENKES/III/2007 on Hospital Infection Control Guidelines (standard 2%)

Index Terms : - Evaluation, ICN, Phlebitis, SOP.

1. INTRODUCTION

Nosocomial infections until now the issue of health care in hospitals around the world. According Suparno (2003), based on data from WHO (World Health Organization) 9 % incidence of nosocomial infections occur in developing countries. Some countries reported that an average of 5-10 % of patients admitted to hospital will get an infection transmitted by a person or of a tool for hospitalized patients.As a result of the incidence of nosocomial

infections(Kepmenkes,2001),are:

1. Duration of treatment (LOS / Length of Stay) longer. Nosocomial infections result in an additional 8 days required per bed each year in the United States.
2. Increased operating costs and increased hospital costs by the patient . In the United States the additional reach one million dollars per year in the hospital with a capacity of 250 placesleep. Besides the things mentioned above will interfere incidence of nosocomial infection of patients who

require treatment (waiting list) as well as reduced productivity and additional costs incurred by the patient's family. Sidoarjo Regency Hospital 've done Nosocomial Infection Control Infection Control Team to establish (Dalin) since 1996 to deal with the problem of nosocomial infection. As since 2011 Nosocomial Infection Control Team (Dalin) becomes one with the Patient Safety Committee and RiskManagement, butthe incidence of nosocomial infections is still volatile (trend/tendency to go up and down).

The big difference in the standards set to Minister (Minister of Health) 270/MENKES/III/2007 on Infection Control Guidelines for Hospitals and Hospital Director Regulation Sidoarjo. It should lower regulatory standards have the same or tighter/smaller percentage, which is less than or equal to 2 %, but this is the opposite, even above the standard hospital Kepmenkes standard, which is more than 2 %. Personal higienes and poor environmental sanitation

could be a cause of nosocomial infections, such as nurses or doctors who perform actions before and after not washing hands, or gloves are used to handle multiple patients without a prior change. This can make the germs from one patient to another patient transmitted through the hands of doctors or nurses who take action to him. Incidence of phlebitis in the last two years, namely 2011 and 2012 in hospitals Kabuapten Sidoarjo, rose steadily. It is feared in 2013 will further increase, if not addressed. The condition is interesting to do research that aims to control the increase in the incidence of phlebitis in Sidoarjo district hospitals so that the incidence of nosocomial infections is not more than 2 % according to Standard Kepmenkes (Minister of Health) 270/MENKES/III/2007 on Infection Control Guidelines for Hospitals, with the title " Evaluation of Control of Nosocomial incidence of phlebitis in the Red, White Rose space Hospital Sidoarjo. "

Research Methode

The purpose of the study is to evaluate the implementation of Standard Operating Procedures Nosocomial Infection Control Installation , especially the Infusion Phlebitis Genesis in Space Red Rose White Hospital Sidoarjo regency and make recommendations for the control of nosocomial infections in hospitals Sidoarjo regency that the incidence of nosocomial infections is less than 2 % according to the standard Kepmenkes 270/MENKES/III/2007 .

Based on this kind of research is a case study in the form of summative evaluative study aimed to evaluate the implementation and impact of implementation of SOPs Nosocomial Infection Control (phlebitis) in Sidoarjo district hospitals . The methods used in this study is the incorporation of qualitative methods and quantitative methods .

This study is an observational analytic study that is an attempt to explain how the process of implementation of SOPs Infusion Installation and impact of phenomena such as the incidence of nosocomial especially phlebitis that occurs in Sidoarjo Regency Hospital after Infection Control Team was formed and implemented.

According to the time, the study design was cross - sectional studies which only capture and analyze asituation at a particular time.

This study is an evaluation of the implementation of SOPs (Standard Operating Procedures) Infusion Installation and impact evaluation that examines whether the inputs , processes and outputs are in accordance with SOPs and Standard Kepmenkes ? Is implementation impact (impact) desired to nurses and patients ?

The research location is in Sidoarjo district hospitals as the study site because of Sidoarjo Regency Hospital is a government hospital B grade education into health care

referral hospital and the surrounding area in Sidoarjo Surabaya as well as the support there that tend to increase the incidence of phlebitis last two years , precisely in the inpatient unit grade 3 Red Rose White, Rose Red and White which is the lowest class in hospitals and high- rise in the incidence of phlebitis least the last two years compared to other inpatient ward.

The sample is the total population, ie all nurses, both employees and or students who put in the IV needle inpatient Grade 3 Red Rose White Hospital Sidoarjo regency and see the results of the installation of needle infusion in patients during March 17 to June 30, 2013 phlebitis does occur, where there are signs : inflammation, redness, fever / heat, pain, swelling, or skin damage .

A. Input

1.SOPs (Standar Operating procedures) Evaluation at SOPs.

SOP is used today in hospitals Sidoarjo regency, referring SAK (Nursing Standard) 1993. Legally predetermined Nursing Standards (IFRSs), enacted and implemented in all hospitals in Indonesia through the Decree No. Directorate of Medical Services. YM 00.03.2.6.7637 1993 on enactment of IFRSs in the hospital. Though the item on the SPO incomplete as no glove use. This is important, because at the time of the study, one respondent when it stuck a needle and wants plastered / closed, sticky plaster continues to nurse the gloves, the gloves finally moved and the blood of patients who have not closed flowing into the hands of nurses who do not ear the gloves.

Respondents also did the SOP items, though at SOP Installation Infusion Sidoarjo Regency Hospital. They knew it was over the internet, Division of Safety of patients, and others.

There are items that are not in the SOP Installation Infuse, but important risk of danger to the nurse / employee, patient or others, such as wearing gloves, how to properly needle, needles littering in a safe place. This is in accordance Guidelines for Universal Precautions in Health Care (Achmadi,2005)

Wash hands and gloves are a key component in minimizing the spread of disease and infection free environment maintain.

Incidence of blood out of the hands of the respondent 's ungloved hand,could lead to the stabbing was not sterile conditions, and respondents can be infected with the disease. The result of the installation of the infusion needle in the end there phlebitis in these patients.

Installation is expected to sterile infusion needles with proper aseptic techniques appropriate personal hygiene efforts, because it fits the purpose Kepmenkes 1204 /2004 to avoid the risks and health problems as well as the transmission of diseases such as nurses should wash hands before and after the action, if wearing gloves, gloves used only for one patient / one action or by spraying / antiseptic

solution gave the gloves to be used before the next action, so that aseptic technique is maintained. This is to maintain personal hygiene, both nurses and patients.

How to put a needle correctly, this SOP important items also included in the SOP Installation Infusion, because according to the observation results of the research / researcher observation, if the installation is not correct infusion needle, usually after plugging the patient's blood will flow everywhere uncontrolled.

Dispose of waste in a safe needle and closed. This is according to Minister Number 1204/MENKES/SK/X/2004 regarding infectious waste / medical waste solid / sharp should be collected in a container without regard to contaminated or not. The container should be leak-proof, puncture-resistant and sealed. This must be done correctly, because harm to anyone who used needles punctured infusion, can be risky punctured, injuring up to bleed, transmission of the disease to be death for the former the infusion needle stick, because in addition to the sharp also been contaminated by the patient's blood.

On important matters for consideration to Incorporate these items into the SOP Installation Infusion. Standard Operating Procedure as a basis / guidelines in the work, it is important to be socialized and evaluated it every year.

The respondents in the implementation of compliance the SOP Installation Infusion Sidoarjo Regency Hospital, is as follows :

Table 1. espondents Compliance Assessment Implementation of SOP in Sidoarjo Regency Hospital Infusion Installation

No	Item SPO Installation Infusion	Obedience		obedience Percentage (%)
		Yes	No	
1.	Provide explanations to patients .	30	0	100,00
2.	Wash hands before action	26	4	86,67
3.	Patient lie on his back (supine)	25	5	83,33
4.	Checking back fluid will be given.	16	14	53,33
5.	Installing the mat	23	7	76,67
6.	Preparing the area to be installed	30	0	100,00
7.	Determining the vein area to be used/stabbed.	30	0	100,00
8.	Disinfect the area to be pierced with a diameter of 5-10cm.	29	1	96,67
9.	Infusion needle piercing/abocath the vein has been determined.	30	0	100,00

Based on the above data , the entire item of SOP Installation Infusions at Sidoarjo Regency Hospital has been done by respondents, only the percentage of

implementation varies. The compliance of the respondents in the SOP Installation infusions are used now, namely :

a. 100 % of respondents obedience must be maintained , because the SOP is a base in the works .

b . The percentage of 97 % (29 of 30 respondents) dutifully carrying out items :

1) disinfect the area to be pierced with a diameter of 5-10 cm / direction .

2) Calculate the number of drops as needed .

3) Wash hands after action .

It should do the things above 100 % because it can impact patient harm such as :

1) disinfect the area to be pierced, if it is not done it will occur contamination at the site of insertion of sterile needles and syringes, so the possibility of the occurrence of phlebitis big impact. This is consistent with the definition of " Sterilization Desinfeksi " in Disinfection and Sterilization Decontamination through the Kepmenkes 1204 2004.

2) Calculate the number of drops as needed . This is important so that no deaths in patients with edema / swelling , tightness , inflammation of the lungs as the patient's Red and White Rose .

3) Wash hands after action . This must be done, for the hand of the respondents could be an intermediary transfer of disease from one patient to another well himself and the people / whatever he was holding before washing hands, because this is an appropriate decontamination efforts Kepmenkes 1204 2004. According Susiati (2008) , performed hand washing purposes , namely to :

a) Lifting microorganisms have on hand .

b) Prevent the cross infection (cross infection) .

c) Maintain sterile conditions .

d) Protect yourself and patients from infection .

e) Provide fresh and clean feeling .

c . The percentage of 87 % (26 of 30 respondents) dutifully carrying out items :

1) Wash hands before action .

This is important, it should be 100 % of the respondents to implement, because hand- responders could be an intermediary transfer of disease from one patient to another, himself and the people / whatever he was holding . Respondents must perform an act of hand washing / patients so that no transmission of disease.

This is decontamination Efforts Kepmenkes 1204 2004.

2) Paying attention the patient's reaction .

It is important that the installation was carried out to determine the respondent infusion needle causes pain in a patient ? if it's yes , then the respondent must correct the cause of pain patients after infusion needle installation that does not happen the things that are not desirable from the infusion of action, including phlebitis , because the observations of researchers, patients in pain can be caused by the rupture of veins

after intravenous installed , but if the infusion technique is correct , the patient's reaction would have been good.

- a. The percentage of 83 % (25 of 30 respondents) dutifully carrying out items :
Patient lie on his back (supine).
It is good if it could be implemented to facilitate the infusion correctly and appropriately .
- b. The percentage of 77 % (23 of 30 respondents) dutifully carrying out items :
Installing the mat .
This is done so that the action does not contaminate the patient's bed linen .
- c. The percentage of 60 % (18 of 30 respondents) dutifully carrying out items :
Remove the air from the hose .
It is absolutely done, should have 100 % respondents implement that does not happen embolism (air entry into the bloodstream), because fatal in patients. This is important and should be disseminated to all the nurses who take action infusion. It is important for socialization and training infusion is true and correct.
- d. The percentage of 53 % (16 of 30 respondents) dutifully carrying out items :
Recheck the fluid to be administered .
This should be implemented 100 % of respondents so that no fluid administration errors, yan can be fatal if it goes wrong administration of drugs, such as the death of the patient. It has often socialized well by the Patient Safety Division, which checks and giving the right drug and the right type and dosage. It is not yet implemented 100 % of respondents , could have been there in the standard fluid infusion and infusion needle off or does not work because the patient flow from the shower . It is often the case .
- e. The percentage of 27 % (8 out of 30 respondents) dutifully carrying out items :
Smoothed patients .
It is well done for aesthetics , so that the patient does not appear that his body should be covered, so as not to cause lust is seen .

In addition to the items in the SOP Installation Sidoarjo Regency Hospital Infusion used now, there are other important items on the patient and others at risk, but has done the respondents. Installation of respondents' knowledge about SOP infusions obtained from the internet, Division of Patient Safety Committee on Patient Safety and Risk Management, course material or from fellow nurses, either at home sick or from outside the hospital, and others.

Table 2 Assessment Item SOPs that There Is No Installation Infusion in Sidoarjo Regency Hospital, Already Implemented Respondents

No	Items that are not in the SOP Installation Infusion	Implementation		percentage of compliance
		Yes	No	
1.	Prepare Equipment and materials	30	0	100,00
2.	Wearing gloves during the action and take it off after the action	29	1	96,67
3.	Clean the area of the plume if any.	3	27	10,00
4.	Installing and removing the tourniquet as needed	26	4	86,67
5.	Abocath needle with a needle hole position 45° facing up and after blood appeared at the base of the canule abocath enters slowly and simultaneously issued by nudging the needle while the other hand hold the canule in right place.	29	1	96,67
6.	Disposing of needles abocath into the safety box or box esorplaboti (particularly safe place closed for needle litter).	30	0	100,00
7.	After the action off the gloves and throw it in the trash infectious.	29	1	96,67
8.	Noted on the status of books, registers and other important records (book ICN	30	0	100,00

2. HR (Human Resources)

Human Resources (HR) is: ICN (Nurse Supervisor Infection)

a. Quantity / amount

According to the Decree of the Minister of Health 270/MENKES/III/2007 Pain Control Guidelines Infeksi Rumah ICN required to have a full time, with a ratio of 1 (one) for each ICN 100-150 beds.

Currently Sidoarjo District Hospital has 600 beds and 1 ICN. Supposedly there ICN number 6. So the amount of approximately 5 ICN assuming a ratio of 1 ICN for 100 beds. This weighing of the development and needs of Sidoarjo Regency Hospital. Should ICN through Patient Safety Committee and Risk Management to apply for additional manpower and workload requirements analysis and for ICN kapada Director.

b. quality:

b.1. Activeness ICN (Nurse Supervisor Infection)

According to 30 respondents, ICN is never routine supervision in rooms up to 3 months.

Depth interview survey data above 30 respondents replied that the ICN is not active in supervising the activities of nosocomial infection control in the room up to 3 months. Implementation of Infusion well SPO Installation 57 % , 40 % pretty , and less than 3 % obtained from each respondent behavior unattended ICN .

Observation, ICN is only one person and duplicate tasks that can not be full time in the monitoring and control of nosocomial infections . ICN must seek supervision to indoor regular schedule once a month though , because according to the observations of researchers, nurses need to make the perception of phlebitis and its prevention as well as right and proper actions in infusion.

This result is consistent with the results of the study Kuswanto, Setyoadi, Cantika (2013), there is a relationship between the supervisory head room, nurses' attitudes to compliance with the implementation of standard operating procedures (SOPs) infusion with significance (P value : 0.000 ; α : 0,05) about the importance of supervision. Supervision and coaching ICN through supervision is important, because the results of observations, the determination of nosocomial infection and phlebitis are not, they are not the same, even though they know the definition of phlebitis, and compliance on any item SPO Installation Infusion, not all of 100.00% of their intent to understand and implement, like remove the air from the hose, which carry only 60.00%, but it can lead to emboli which can cause death of the patient.

B. Process

The research results of the implementation of SPO Control Nosocomial Genesis Phlebitis is as follows :

1. Recording actions and events in the book ICN

Each room has a notebook ICN (Infection Control Nurse) which contains all the service records of events in the space, such as pairs of infusion, chateter for patients bedrest that can not urinate in the shower, NGT / sonde for entering food through the patient's nose, phlebitis, Pressure sores, swelling.

ICN book is used to record each incident and collected or requested each month by the ICN to be made monthly report the incidence of nosocomial infections.

Based on observation, record books ICN almost every room never recorded any incident when the reason of nurses is busy serving patients that do not have time or forget. The fact is that almost no nurse employees free time.

Each turn of guard duty shift morning, afternoon and evening, there operand for reports between agencies shift nurses are replaced by the substitute. They went around to each patient while the nurse agency that replaced each patient testified that the agency is replacing nurses. Red and White Rose is no morning report / morning report by the chief administrative space in the room every morning after morning assembly.

The nurses give report after touring each patient, preparing the patient for drug delivery.

If physician circumferential visit / visit examination of the patient, the nurse followed the recipe to prepare And write a resume / statement of medical records. If there is a patient who reported needle intravenous fluids discharged or separated or swelling, then immediately went to the nurse and patient follow up the report. Employees nurse almost no free time, because there are patients who require corrective action. As for recording the results as follows :

ICN book value of recording in January 2013 was good, Because The value is > 80%. Early years, nurses are very excited to work with and good performance, seen also from the record books ICN, with a value of 87.10%. Records the highest incidence in January 2013 was the incidence of phlebitis in Rose White Space by 56 people on average 1.81 phlebitis / day.

ICN book value of the recording of the month February 2013 is good, Because The value is > 80%.

Treading the 2nd month of 2013, the nurse is still working with the spirit though slightly Decreased, as seen from the record books ICN, its value is 82.14%. Note the highest incidence was in February 2013 incident in Space phlebitis White Rose by 47 people on average 1.68 phlebitis / day. White Roses Patients who come from many areas Hemodialysis. Those dialysis usually declining health condition that requires hospitalization.

ICN book value of the recording of March 2013 is sufficient, Because The value is > 60%. Treading the 3rd month of 2013, declining morale nurses, ICN seen from the record books, the value of both is lowered, enough with the value of 67.74%.

Note the incidence of most actions by March 2013 is action switch infusion / new pairs in Space White Rose. The event records that do not exist in March is off / unplugged the IV needle in the Red Rose room. Actions / events in HCU (High Care Unit / Critical patient room at the Red Rose White Space) is still very little, Because they are Relatively newly opened, there is still very little Patients.

Value ICN in April 2013 recording of the book is very less, Because The value is < 40%. Treading the 4th month of 2013, declining morale nurses, ICN seen from the record books, worth than enough to Decrease, much less the value of 33.33%. It's really critical point for Them, their performance plummeted in 4th in 2013. This needs refreshment and supervision, as is known from the results of observations during the study, sometimes when it will start work at the turn of shift, nobody pray " hopefully not a problem and complain". The results of observations during the study as described in front of that work in the Red Rose.

White looks very solid, until they sometimes there is not time to pray Asr. They may be saturated with the same job continuously and face many problems and complaints, but from the observation during research, they are giving friendly service and responding to complaints from the Patients and their families well, and obviously in providing information to Patients and their families. Alternative of their saturation, could be

included trainings / seminars, recreation, and others .

Note most events in April 2013 was eventful Swelling in Space White Rose. White Roses Patients who come from many areas Hemodialysis. Those dialysis usually declining health condition that requires treatment in hospital, and his condition often occurs swelling/edema, blood vessels prone to rupture and swelling occurs infusion needles, besides their many blood transfusions because of anemia (lack of blood), blood cell deformity, and others .

The records that do not exist in April was the incidence of phlebitis at the White Rose , plug catheter / NG / DC / blood transfusion in Space Red Roses , replacing the IV needle / plug in the new Red Rose and White . It is not recorded in the books ICN , because the notes are very less , only 33.33 % of the existing day during the month of April 2013 notes .

Actions / events in HCU (High Care Unit / Critical patient room at the Red Rose White Space) there is only one record of installing NGT (sonde / tool hose to put food directly into the stomach) for critically ill patients, infusion leak, and the replacement of intravenous needles, appropriate Division of Nosocomial Infection Control program in Sidoarjo Regency Hospital, which is to replace the needle with a new infusion, once per 3 days .

ICN book value of the recording of the month May 2013 was enough , because the value is > 60 % . Treading the 5th month of 2013 , increased morale nurses, ICN seen from the record books, the value of much less be sufficient , with a value of 64.52 % , although it has notas good as March 2013 before falling dramatically, with the value of 67.74 % , just a little difference . It is already showing progress / performance improvement in recording ICN book . This month, researchers have started looking for a data research and they told that head space where they are used as a study Note the highest incidence in the incidence of phlebitis in May 2013 is in the White Rose Lounge . White Roses many patients who come from areas Hemodialysis. They are sick Diabetesto wound care because gangrene, and than they are a lot of blood transfusions because of anemia (lack of blood), blood cell deformity, and others .

The records that do not exist in April was put instruments such as catheters / NG / DC / replace blood transfusions and intravenous needle / new plug in Red Rose .

Note Action at HCU (High Care Unit / Critical patient room at the Red Rose White Space) which most is put up NGT (sonde / tool hose to put food directly into the stomach) for critically ill patients, while there is no record of the incident in May was swollen and infusion jammed .

ICN book value of the recording of the month June 2013 is good , because the value is 80 % . During the month of June

2013 study, respondents noted the incident or act diligently in his office . The underlying experience, the importance of supervision ICN liveliness .

Note most events in June 2013 was eventful phlebitis in Space Red Rose. Red Rose many patients suffering from Lung Inflammation and edema / swelling , Asthma , Shortness of Breath, and others .

The records that do not exist in June was the incidence of phlebitis, swelling, infusion leaked / seeped, jammed in Space White Roses, installing instruments such as catheters / NG / DC / blood transfusion in the Red Rose and White, as well as replacing the IV needle / new plug in White roses, maybe they forgot or did not

have time to replace the needle infusion once every 3 days, because many patients .

Note Action at HCU (High Care Unit / Critical patient room at the Red Rose White Space) which most is put up NGT (sonde / tool hose to put food directly into the stomach) for critically ill patients, but note events in May is a freelance infusion / revoked and jammed .

Recording ICN book in January and February 2013 is good . In March , recording decreased to quite. This recording down continues until April to be very less. This line is not active supervision to the ICN room . Recording an increase be enough in May as the beginning of the study and research increased during the month of June 2013 , recording ICN book to be good .

This recording can be supported by a strong commitment ICN (Nurse Supervisor Infection) with supervision from ICN, so that they also feel cared for and felt it was important to do ICN recording in the book as an evaluation and follow-up .

Observation results of the study, the capacity of the Red Rose White is 91 patients, while the number of nurses 36 divided by 3 shif morning shift , afternoon , and evening, so that 1 (one) nurses handle about 15 patients. Supposedly one of the nurses handle a maximum of 5 patients (Nursing Standard, 1993) .

The tasks that are considered important to the daily routines in the room includes examining a patient care injectable and oral drug delivery, wound care, assisting physicians examine, prescribe patients, receiving and sorting out patient drug (1 lockers drugs for 1 patient), make a record of every patient in the register book, and other basic tasks that are considered important .

Recording at ICN book, because there is no supervision, and supervision suppression task, so they just assume additional duties, not a critical task . Though recording every action and this incident is important as material for the follow-up evaluation in order to better control of nosocomial infections .

2 . Correlation Implementation of Infusion with SPO Installation Level of Education

Table 7 Correlation Implementation of SPO Installation Infusion with Education Level

The above data shows that the percentage of implementation of SOP (Standard Procedure Opearasional) Installation terbesarpada Infusion Nurses D3 levels, which is 68.42 % (13 of 19 respondents D3 Nurse), with good execution .

The level of education for nurses in hospitals Sidoarjo consists of S1 Nursing Profession, and D3 Nurse.

The results showed that the implementation is a good SPO D3 Nurse .

A job does require competence according to their needs. D3 is more focus on skills, making it more suitable for jobs that require skills such as installing infusion. The results also show that way. The nursing profession S1 focus to management , making it more appropriate for the administration or management arrangements nursing services, such as HR arrangements, manufacture SPO (Service Standards operational) or activities that require "brain skills" .

This research study is in line with Peters (1990) in Yaslis Ilyas (2002) , stating the skills consist of knowledge, abilities, technical skills, interpersonal skills will affect a person's performance. Likewise Budiwarni research (1997) in Yaslis Ilyas (2002) which states there is a significant association between level of education and employee performance . This is in line with research Fahriadi (2008) that the D3 and D4 levels of nursing education has the opportunity to perform well. Nurses who have a minimum education level D3 Nursing is referred to as a novice professional nurses they must have behavior, and professional capability, and accountability in implementing care / nursing practice independently basis. It also demanded must have the ability to improve the quality of nursing care by utilizing the nursing science and advanced technology appropriately in order (Nursalam, 2002), and Setiawan, T (2008) .

3 . Correlation Implementation of SPO Installation Infusion with Gender

The data above shows the percentage of implementation of SPO with the largest gender in women, which is 60.87 % (14 of 23 respondents woman) with a good implementation of SPO . The total number of employees nurse Red Rose White were 36 people , and there were students practice, but installing infuse on March 17 to June 30, 2013 as mentioned above . Usually installing infuse if there is a problem , although there is an infusion needle replacement programs once every 3 days, and sometimes executed .

The results of this study indicate that the implementation of SPO good with female gender . This study is in line with research Setiawan, T (2008) which states that there is a statistically significant relationship between the sexes with significant performance Inpatient nurse at Queen's Hospital Zalecha Martapura, where the sex of the nurses that most

men have a poor performance (57.10 %), while that of female nurses, mostly performing well (67.20 %). Female nurses have a good chance performance 2,730 times greater than male nurses. This is consistent with the early history of the nursing profession (Florence Nightingale) is identical to the work that is based on compassion, tenderness of a mother or a woman.

According Koderi (1995), there are differences in job satisfaction and performance between the sexes men and women. Based on the psychological state of the character differences in men and women include:

- a. In general, women hardly have a thorough interest in theoretical questions such as the men.
- b. Activity women in general prefer to concern themselves with a wide range of jobs .
- c. Women are usually not aggressive, likes to preserve and maintain the properties of softness, selfless motherhood and not expect retribution .

4 . Correlation between Implementation of SOP Installing Infusion with The Length of working term

Table 9 Correlation between Implementation of SOP Installing Infusion with The Length of working term

The Length of working term	Implementation of SOP Control of Nosocomial						Amount and Percent (%)
	Good		Average		low		
	Amount	Percent (%)	Amount	Percent (%)	Amount	Percent (%)	
Long > 5 years	2	33,33	4	66,67	0	0,00	6 (20,00)
New (≤ 2 years)	2	28,57	5	71,43	0	0,00	7 (23,33)
Amount	17	56,67	12	40,00	1	33,33	30 (100,00)

The above data shows that the largest percentage of the implementation of SPO Installation Infusion with long work more than two (2) to less than 5 (five) years, there are 76.47 % (13 of 17 respondents with long working > 2 to < 5 years) . In general, the nurse Began to enter the Sidoarjo Regency Hospital until retiring just as a nurse. They sometimes just rotated between rooms, but there is a nurse, from entry until now still in the inpatient unit.

The results of this study indicate that the implementation of the good with the old SPO Work > 2 to < 5 years.

There is a relationship between length of employment and performance. Supposedly the longer people work, the person is more skilled or proficient . When people who have long worked, but the implementation is not good, maybe the person is getting saturation so in need of refreshment, with :

- a. Training related to the competence of nurses in the control of nosocomial infections .
- b. Rotation / move still in the hospital environment, such as

moving space of grade 3 to grade 2 or another .
 c. Mutations / moved out of the hospital, which allows conformed competence , could at health centers or other agencies .
 d. The increase career path, because people are working diligently so that ultimately there is a change faring better, make it more useful and powerful, and no appreciation / rewards of his work to increase the motivation to work. This is in line with Siagian (2002) that the employee ranks and wage effect on job satisfaction and employee performance .

5 . Correlation between Implementation of SOP Installation Infusion with Age Table 10 Correlation between Implementation of SOP Installation Infusion with Age

Age	Implementation of SOP Control of Nosocomial						Amount and Percent (%)
	Good		Average		low		
	Amount	Percent (%)	Amount	Percent (%)	Amount	Percent (%)	
Age > 30 years old	6	60,00	4	40,00	0	0,00	10 (33,33)
Age < 25 to ≤ 30 years old	7	63,64	3	27,27	1	9,09	11 (36,67)
Age ≤ 25 years old	4	44,44	5	55,56	0	0,00	9 (30,00)
Amount	17	56,67	12	40,00	1	33,33	30 (100,00)

The above data shows the largest percentage on the implementation of SPO Installation Infusion with the largest age group by age > 25 to < 30 years, which is 63.64 % (7 out of 11 respondents with ages < 25 to < 30 years). Implementation SPO good .
 The number of respondents age distribution is almost the same , namely 9.10 and 11 , the range of numbers are not too far away, so that a more representative / representative of so homogeneous .
 The results of this study indicate that the implementation of SPO good with age > 25 to < 30 years .
 According to developmental age, aged 25 to 30 years are of childbearing age, where at the age of graduating from college, emotionally mature and think, making it easier to apply science and knowledge optimally .
 Age is one factor that is dominant to the formation of one's work . According to Gibson (1996) , as subvariabel age demographics have no direct effect on the behavior of individual work .
 Kertonegoro (2001) in Kris (2007) states that age has an influence or feedback turnover, absenteeism, productivity, and job satisfaction . The relationship between age and productivity is not conclusive, because despite high age can have a negative impact on the skill, but can be offset positively because pengalaman. Hal is in line with the results of the research, which is not a good implementation of SPO

in old age > 30 years, but the implementation of the SPO both at the age of > 2 to < 5 years .

C. Out Put / Results

1 . Influence Implementation of Genesis SPO Installation Infusion Phlebitis

The results of the implementation of the control of nosocomial is reduce to a minimum the occurrence of nosocomial infection, in this case is phlebitis .

The hasil penelitian are as follows :

Table 11 Effect of Implementation of SOP Control Nosocomial SPO on the incidence of phlebitis

Implementation SPO	Incidence				Amount and Percent (%)
	Phlebitis		Not Phlebitis		
	Amount	Percent (%)	Amount	Percent (%)	
Good	0	0,00	17	100,00	17 (56,67)
Average	0	0,00	12	100,00	12 (40,00)
Low	1	100,00	0	0,00	1 (3,33)
Amount	1	3,33	29	96,67	30 (100,00)

The percentage above the data indicate that the implementation of SPO good, does not happen Phlebitis 100, 00 % . Percentage SPO less implementation, phlebitis Occurred 100.00 % .

Here there is inflammation of phlebitis, swollen, red, tender or until hot embossing abscess at the site of installation of the infusion needle , while not phlebitis Occurred here is permeable, loose or revoked Because Patients Themselves uncomfortable, and there are hallucinations like someone told her to go home, pull out the IV, and swelling / blood vessel rupture, but it does not happen inflammation / infection . As for the implementation of the 100.00 % less, there is only one (1) respondent is 3.33 % (1 out of 30 respondents). Respondents to the implementation of SPO Installation Infusion less Because the respondent did not carry items of 18 items Infusion Installation items, namely :
 a. Wash hands before the action, here respondents already washing hands and wearing gloves , but previously used to perform actions on other Patients before carrying out actions that the patient will be assessed / Investigated . It was risky hands respondents transmits the disease in other Patients, so the Researchers grouped the respondents who do not wash their hands before action .
 b. Patients not on your back, cause pain, so respondents do not let the patient supine / recumbent .
 c. Recheck the fluid is given, Because the fluid already there, the condition of the needle infusion time off,

Because many Patients Because of motion sickness withstand the disease is lung cancer, there is edema / swelling and tightness . The patient is a 67 year old mother with .

d. Installing pengalasan . It is not implemented , so everything is placed directly above the patient bed linen , bed linen so it Becomes a little dirty , even after the completion of the action all the tools , materials and rubbish and cleaned trimmed former action

e. Remove the air from the hose , fortunately did not happen the things that are not desirable to 3 days infusion needle was changed again cause phlebitis occurred. Respondents may forget that time, because the act of another patient respondents expenditure of air hose. This could mislead embolism can cause death .

f. Disinfect the area pierced. It happened, several times respondents sought veins in different locations, each being stabbed diswab alcohol, but the stabbing right, the location has not been disinfected, probably forgot because some times can not find a vein, even when biased obtain the right vein, the needle has not been fixed, sticky plaster continues to gloves , and gloves are removed, the patient's blood out through the holes that have not been closed abbo cath plaster / fixation and the respondents hands without gloves, and the patient's blood is cleaned with alcohol swabs .

g. Counting the number of drops as needed. Droplets only briefly diminished without looking at the clock. It

should be observed, especially short ness of the patient's condition and edema/swelling. Fortunately until day 3 of infusion needle replace das phlebitis, do not avoid things that are not desirable.

Percentage occurrence of phlebitis of the results of the study were 3 % above the Nosocomial Infection Control Standards Sidoarjo district hospitals, especially phlebitis 2.5%, and Decree of Ministre of Health, No. 270/MENKES/III/2007 by 2 % . Incidence of phlebitis was taken up after three days of infusion needle mounted, arising inflammation, redness, swelling, tenderness at the site of infusion needle mounting by nurses in the Red and White Rose . The results of this study indicate that the implementation of SPO effect on the incidence of phlebitis, where implementation does not lead to a good SPO phlebitis, while the implementation of SPO less resulted in phlebitis .

This is consistent with the thesis empirically Masdalifa, P (2008) that the analysis obtained Bivariate relationship between nurses who carry out the preparation in accordance SPO infusion phlebitis in patients with incident , it is seen from the p value of 0.001, while the analysis of the results obtained Bivariate also no relationship between nurses who carry out the SPO infusion according to the incidence of phlebitis in

patients, it is seen from the p value of 0.008 .

The study was a cross sectional study only a short time on December 17 to June 30, 2013 , with a sample of 30 respondents obtained 1 phlebitis, so getting above 3 % phlebitis Hospital Quality Control Standards (2010) of 2.5 % and Decree of Ministre of Health Number 270/MENKES / III/2007 on Hospital Infection Control Guidelines 2% .

Incidence of phlebitis January to June 2013 in the Red Rose White

Percentage incidence of phlebitis during January to June 2013 based on the record books of the ICN second incident, because the installation is done by a second infusion needle nurse Red Rose White, whereas the first incident, conducted by nurses emergency room (ER). Details as follows:

Table 12. Incidence Phlebitis in Red Rose White from January to June 2013

Month	Amount		
	Patient	Phlebitis	Percent (%)
January	525	87	16,57
February	458	53	11,57
March	457	14	3,06
April	492	7	1,42
Mai	452	24	5,31
Juni	896	31	3,46
Amount	3280	216	6,58

The above data shows that the percentage occurrence of phlebitis of the data room 2013 from January to

June average is 6.58%. This exceeds the Nosocomial Infection Control Standards Sidoarjo district hospitals by 2.5% and Decree of Ministre of Health Number 270/MENKES/III/2007 on Infection Control Guidelines Hospitals by 2%.

ICN book recording the results showed that the percentage occurrence of phlebitis of the data room from January to June 2013 the average is 6.58%. When specified each month from January to June 2013, just below the APR standard, but very less records in April. Based on the incidence of phlebitis ICN above the standard 2.5% according to SK Hospital Infection Control Committee in Sidoarjo district number: 04/DALIN/2010 on the Determination of the incidence of infection control lines (Pengendalian Service Standards Manual Hospital Nosocomial Infection Sidoarjo Regency, 2010) and Kepmenkes 270/MENKES/III/2007 on Hospital Infection Control Guidelines 2%.

A. FGD (Focus Group Discussion)

FGD results and evaluation of inputs , processes , output and control implementation nosocomial infections , particularly SPO Installation infusions include:

1 . Evaluating returned items that are considered less SPO .

It is important to assess and reassess items infusion

stages correct and appropriate as a nosocomial infection control standards .

It is important to do on a regular basis , such as once a year . If necessary make suggestions / recommendations to the Ministry of Health to review the decree No. Directorate of Medical Services . YM 00.03.2.6.7637 1993 on enactment of IFRSs in the hospital , so that the item SPO infusion stages right and proper , so that the better control of nosocomial infections , such as wearing gloves , protective hand as if it was doing the action , not the nurse hands contaminated , for example by a patient specimens of blood , pus , etc. , because sometimes nurses do not know all of types of illness the patient as Universal Precautions Guidelines on Health Services .

2 . Increasing the activity of ICN with supervision , coordination and communication between the ICN room nurses , especially head room as the person in charge of the room.

It is important to make the perception among nurses room , especially phlebitis , definition , recording at ICN books , action and proper handling and proper . Supervision attempted at least once a month to the room , the bias in rotation .

This can be done by socialization through a monthly magazine called Sidoarjo Regency Hospital Medivo , meeting weekly regular meeting services / nursing / morning report about the things that affect phlebitis , how medical treatment and proper care , and other matters related phlebitis in particular and nosocomial infections in general .

3 . ICN (Infection Control Nurse / Nurse Supervisor Infection) should propose the addition of the ICN and power analysis to full time Director of Sidoarjo Regency Hospital through Psien Safety Committee and Risk Management .

This is according to Minister 270/MENKES/III/2007 on Guidelines for Infection Control Hospital where ICN ratio of 1 to 100 to 150 beds , the current reality ICN number 1 with 600 beds , less than 5 people that ICN assuming 1 ICN for 100 beds .

4 . Records with a special form causes of phlebitis in each patient .

Recording every action and events in the book ICN should have activated with supervision from ICN , so if it is held with the recording of a special form causes of phlebitis in every patient , be sustainable for the evaluation and analysis .

5 . Observing all the factors that cause the occurrence of phlebitis , analyze / evaluate and follow-up .

This is already done ICN when evaluation results and processes . Follow-up if done , is likely to have better impact on nosocomial infection control in general , phlebitis in particular .

6 . Improved skills in infusion .

In addition to socialization , if the condition in the room

, an increase in the skills needed infusion nurse to equate the true perception to action and maintenance infusion needle mounting and proficiency in performing these actions , such as setting up the IV needle that does not bleed , does not happen by releasing air embolism , and others.

7 . Development and deepening of nosocomial infection control research to progress , especially phlebitis hospital .

Research , preferably internal , about nosocomial infection control and prevention impact is more important for the development of the things that are not desirable and overcome, not only phlebitis . Nosocomial infection control should be an integral part of all the lines so that the result is optimal hospital .

CONCLUSIONS

1. Input

a. All respondents dutifully implement the SPO with the percentage distribution of the different compliance and there are important items infusion, but not implemented, and there are important items SPO. SPO not in accordance Universal Precautions Guidelines.

b . Human Resource for ICN was inactive to do supervision and amount ICN was less of 5 , there are only one that should have been 6.

2. Process

a. Recording ICN book well in early 2013 , and then decreased to very less in April , then increased again until June 2013 , in line with the research. This need for supervision

b . There is a relationship between SPO implementation with education level . SOP is well implemented by diploma 3 nurse graduation. There is 68.42 % (13 of 19 respondents diploma 3 nurse graduation) .

c . There is correlation between SOP execution with gender. The one who can execute is well is female. There is 60.87 % female (14 out of 23 female respondents) .

d . There is correlation between SOP execution with the length of working term. SOP is well implemented by nurses who have length of working term are > 2 to < 5 years 76.47 % (13 of 17 respondents with the length of working term > 2 to < 5 years) .

e . There is correlation between SOP execution with age. SOP is well implemented by age > 25 to < 30 years 63.64 % (7 out of 11 respondents with age > 25 to < 30) .

3. Output

a. There is influence of the execution of the SOP Installation Infusion to incidence phlebitis . SOP is well Implemented, does not occur Flebitis 100 % . The implementation of SPO less cause phlebitis incidence of 100 % . Incidence of phlebitis 3.33 % above Kepmenkes Standards and District Hospital . Sidoarjo.

b . The average percentage incidence of phlebitis January to June 2013 was 6.58% above the Standard and Hospital Kepmenkes Sidoarjo.

Recomendations

The things as input recommendation in nosocomial infection control , especially phlebitis are :

1. Evaluating returned items Infusion appropriate SPO Installation Guidelines hazards and precautions Universaldi Health Services , such as disposable gloves , trash storage in a safe place needles / closed .
- 2 . Propose the addition of ICN and ICN analysis according Kepmenkes 270/MENKES/III/2007 .
3. Activation ICN for supervision , coordination , communication and dissemination on matters relating to the control of nosocomial infections , especially phlebitis , also socialization SPO items , such as discharge , recheck the fluid is given , and others .
4. Turning recording ICN book includes a special form causes of phlebitis and look at all the factors that cause phlebitis , analyze / evaluate and follow up .

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