

The Relationship Of Nurses' Compliance In Implementing Standard Operating Procedures (SPO) For Installing Infusions With The Incident Of Phlebitis In The Inpatient Room RSI Mabarro MWC NU Bungah

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ABSTRACT

The incidence of phlebitis will increase along with poor infusion insertion actions or not in accordance with hospital SPO. This study aims to analyze the relationship between nurse compliance in the implementation of infusion SPO with the incidence of phlebitis in the inpatient room. This study used a cross sectional approach. The sampling technique used in this study used total sampling with a sample size of 22 nurses and 22 inpatients at RSI Mabarro MWC NU Bungah in February 2024. The instruments used in this study were observation sheets for compliance with SPO for infusion and VIP (Visual Infusion Phlebitis) screening sheets to measure the occurrence of phlebitis. The results showed that out of 22 nurses, 20 nurses were compliant with SPO for infusion with 18 patients (72.7%) not experiencing phlebitis, and 4 patients (18%) patients experiencing phlebitis. The results of data analysis showed a significance value of $0.015 < 0.05$, which means that there is a relationship between nurse compliance in implementing SPO infusion with the incidence of phlebitis in patients. The compliance of nurses who carry out the SPO for infusion installation will obediently reduce the incidence of phlebitis in patients. It is recommended for nurses to always improve compliance with infusion installation according to the SPO set by the hospital to minimize the occurrence of phlebitis in patients during hospitalization.

Keywords: Compliance, Nurse, Phlebitis

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INTRODUCTION

Disease infection related service health or infection nosocomial moment This called with term Health Care Associated Infections (HAIs). Disease frequent HAI infections happened at home one of them is sick is phlebitis Phlebitis is something infection experienced by the patient during cared for and demonstrated symptom infection Because inflammation The internal lining of the veins is marked with pain along the vein in the puncture area , redness , swelling , and warmth after 72 hours the patient at home Sick (Eka Safitri et al., 2023) . Phlebitis occurs if No handled with Serious will risky extend the length of treatment patient at home pain , increase cost treatment , sepsis as well Can cause death (Indonesian Ministry of Health, 2017) . According to data from the World Health Organization (WHO) in 2021, there will be 1.7 million per year and nearly 100,000 deaths caused by Health-Care Associated Infection (HAI) or Hospital-Acquired Infections (HAIs). In Indonesia from 10 houses Sick general that

is of 588,328 patients who experienced phlebitis were 16,435 patients (2.8%) and at home Sick private of the 18,800 patients, there were 293 phlebitis incidents (1.5%). Phlebitis data at RSI Mabarro MWC NU Bungah in January 2024 occurred enhancement as much as 37.23 % of mark indicator 35%.

Abdu, (2019; Eka Safitri et al., 2023) say that There is a number of factor affecting the occurrence of phlebitis after installation infusion that is age , type venereal , disease accompanying , size needle , type fluid , location infusion , treatment infusion , duration infusion and technique installation infusion . From several factor reason reason one of them is phlebitis There is factor technique installation infusion, where is the nurse in do installation infusion This Already has SPO (standard operational procedures) that have been determined by the agency. On installation infusion This Nurses should too have level high compliance in implement standard operational procedure (SPO), cause If No obedient will impact on its occurrence infection nosocomial (Eka Safitri et al., 2023) . Installation action infusion will quality in implementation , if exists obedience power health and refers to procedures installation infusion (Fauzia & Risna, 2020) .

Obedience nurse in implementation of installation SOP infusion defined as obedience for do installation infusion in accordance with existing SPO procedures set for reduce problems that occur consequence installation infusion. One of possible factors disconnect chain risk injury in service health is determination clear standards and compliance to standard operational procedures , clear procedures help prevent happen injury (Purnawan & Sihura, 2024) .

Based on a number of study previously (Kusumawati et al., 2022, Putra & Fatmawati, 2022, (Tiongland et al., 2022)) there is connection between obedience nurse in implement standard procedure operational installation infusion with the incidence of phlebitis in patients . Based on description above, research This aim for know connection level obedience nurse in implementation standard procedure operational installation infusion with occurrence of phlebitis.

METHODS

Study This use type study analytic observational with approach cross-sectional. The sampling technique used in study This use technique non-probability sampling with method total sampling with big sample as many as 22 nurses and 22 patients take care stay at RSI Mabarro MWC NU Bungah. Observations were conducted for one month in February-March 2024. Variable in study This that is obedience nurse in implementation standard procedure operational installation infusion as the independent variable, and the incidence of phlebitis as the dependent variable. Instruments used in This that is sheet observation standard procedure operationsl installation infusion For measure installation SPO compliance infusions, and sheets VIP (Visual Infusion Phlebitis) screening for measure occurrence of phlebitis in installed patients infusion. Data analysis used the chi-square statistical test.

RESULTS

Research result as following:

Table 1. Characteristics respondents nurse based on type gender, age, education, and years of service

General data	Frequency (f)	Percentage (%)
Gender		
Man	7	31.8
Woman	15	68.2
Total	22	100
Age		
22-27 Years	8	36.3
28-33 Years	9	41
>34 Years	5	22.7
Total	22	100
Education		
D3 Nursing	9	41
Nurse Education	13	59
Total	22	100
Years of service		
New (<6 Years)	10	45.4

Medium (6-10 Years)	8	36.3
Old (>10 Years)	4	18.2
Total	22	100

Based on results table 1 shows that Most respondents nurse manifold Female gender was 15 people (68.2%), in part big respondents aged 28-33 years as many as 9 people (41%), Most respondents 13 people (59%) were educated as nurses , and most of them respondents with work period only <6 years old as many as 10 people (45.4%).

Table 2. Characteristics respondents patient based on type gender and age

General data	Frequency (f)	Percentage (%)
Gender		
Man	10	45.4
Woman	12	54.5
Total	22	100
Age		
1-10 Year	3	14
10-17 Years	2	9
18-35 Years	2	9
36-45 Years	4	18
46-60 Years	6	27
>60 Years	5	23
Total	22	100

Based on results table 2 shows that part big respondents patient manifold sex Woman as many as 12 people (54.5%), in part big respondents aged 46-60 years as many as 6 people (27%).

Table 3. Compliance nurse in implementation standard procedure operational (SPO) installation infusion

Obedience Nurse	Frequency (f)	Percentage (%)
Not obey	2	9
Obedient	20	91
Total	22	100

Based on results table 3 shows results that part big respondents obedience nurse in do standard procedure operational installation infusion is obedient as many as 20 people (91%).

Table 4. Phlebitis incidence in patients in the room take care stay

Phlebitis Occurrence	Frequency (f)	Percentage (%)
Phlebitis	6	27.2
No Phlebitis	16	72.7
Total	22	100

Based on results table 4 shows results that part big respondents patient in the incidence of phlebitis is 16 people (72.7%) had no phlebitis.

Table 5. Analysis connection obedience nurse carry out standard procedure operational (SPO) installation infusion with the incidence of phlebitis in the room take care stay

	Phlebitis Occurrence				Total	
	Phlebitis		No Phlebitis			
	f	%	f	%	f	%
Obedience Nurse						
Not obey	2	9	0	0	2	9
Obedient	4	18	16	72.7	20	91
Total	6	27.2	16	72.7	22	100

Based on results table 5 shows results that of 22 nurses and 22 patients, 2 nurses (9%) did not obedient in carry out installation SOP infusion. There were 2 (9%) patients who experienced phlebitis, and 20 (91%) nurses were compliant carry out installation SOP infusion. There were 4 (18%) patients who experienced phlebitis. The results of data analysis using the chi-square statistical test were obtained results that mark significant $0.015 < 0.05$ which means there is connection between obedience nurse carry out standard procedure operational installation infusion with the incidence of phlebitis in patients in the room take care stay at RSI Mabarro MWC NU Bungah.

DISCUSSION

Identification Obedience Nurse in carry out Standard Procedure Operational (SPO) installation Infusion, Based on results research, level obedience nurse carry out standard procedure operational installation infusion show level obedient as many as 20 people (91%). This matter in line with study (Safitiri et al., 2023) about relationship Level of compliance nurse in implementation of installation SOPs infusion to incidence of phlebitis at home Sick obtained results of 100 respondents amounting to 78 nurses obedient in carry out installation SOPs infusion. Study (Kusumawati et al., 2022) obtained results that of 44 nurses 38 nurses obedient to the installation SOP infusion. Obedience nurse is How nurse Act in a way professional when follow instructions, procedures, or mandatory regulations done or obeyed (Putra & Fatmawati, 2022). Obedience is part from behavior man for follow things certain. Obedience nurse in implementation of SPO installation infusion depend on yourself each nurse. On action installation infusion, principle connection social, reciprocity, and validation social is also important and influences a person obedience. In terms of obedience This related with support Friend Work nor superior for help do implementation installation infusion.

Lots of it compliant respondents with installation SPO infusion because of professionalism from nurse That Alone. Researcher assume obedience installation appropriate infusion with SPO is obligation every competence profession. Installation infusion is action frequent basis do and be competence must a nurse so that SPO installation infusion No foreign and very memorized in a way carefully by the nurse nor power other health does. His height obedience in standard procedure operational installation infusion motivated by several factor among them understanding about instruction, level education, beliefs, attitudes and personality as well as support social (Natalia et al., 2023). According to (Wahyuni Sri, 2020) Compliance is also caused by internal and external factors, internal factors, namely characteristics nurses, personality, attitudes, abilities, perceptions, and motivation, while in the case external that is characteristics organization, characteristics group, characteristics jobs, and characteristics environment.

Research results at the level education nurse show of the 22 respondents 13 (59%) were nurses educated as a nurse. Researcher assume that level education nurse become factor obedience implementation standard procedure operational installation infusion. His height degrees education and competence the nurse did it installation infusion as well as exists policies and procedures from institution own contribution positive in increase compliance and accuracy nurse in installation infusion (Ridhani, et al., 2017; Kusumawati et al., 2022).

Based on results study There is a number of respondents who did not obedient or not enough in accordance in run SPO installation infusion. Based on results observation research carried out in the emergency room and ward take care stay at the SPO installation stage infusion obtained a frequent thing missed is nurse No wash hand before use sarong hand, time installation infusion patient No disinfected Repeat at the puncture area after hold on for look for vein location. Researcher assume obedience nurse influenced by understanding, education, attitudes, personality, beliefs and support social, researchers also suspect that Disobedient the because lack of activity resocialization of installation SPO infusion, p this is what can be done cause low understanding nurse about implementation standard procedure operations that will be impact on non-compliance implementation of SPO. There are nurses obey or not obedient in carry it out installation infusion in accordance standard procedure operational can also be done influenced by motivation. Motivation nurse in do installation infusion varies, nurses who have motivation will encouraged for always obedient in do activities, on the contrary not enough nurses motivated will tend forget or not enough thorough do action installation infusion based on home SPO Sick (Kusumawati et al., 2022).

Identification Phlebitis Occurrence in Patients, Based on results research, the incidence of phlebitis in patients There were 6 (27.2%) patients who experienced phlebitis out of 22 patients who

were treated installation infusion. In 6 patients appear Signs of mild phlebitis are generally found on treatment 3rd and 4th day. Lots of signs found moment researcher observation that is pain, redness, and swelling at the puncture area 2 patients had phlebitis children, and 4 patients adults with a history of disease certain one of them is patient with diabetes mellitus and aged >60 years. According to study (Rosita et al., 2023) There is a number of factor affecting The occurrence of phlebitis includes the length of installation infusion , type fluid infusion , location stabbing , level severity disease , size Catheters and techniques installation infusion. On results observation patients with phlebitis, location installation infusion patients on the cephalic vein. Research results in line with study (Silviawaty & Putri, 2020) with title connection between location installation infusion with the incidence of phlebitis, the results of the chi-square test obtained $p=0.002<0.05$, which means There is connection significant between location installation infusion with occurrence of phlebitis. Researcher assume this metacarpal area are in areas of the hands that are frequently used moved and owned small size, as well the position of the vein is not straight possible happen friction on the vein wall with catheter Intravenous, excessive selection of veins near with wrist easy hands for happen Genre come back blood so that phlebitis occurs. In more veins big and little branch will makes it easier in installation fluid infusion and avoid risk broke vessels blood. Position infusion also affects the incidence of phlebitis, because That avoid venous infiltration , sclerotic veins or thrombus, and wrist damaged hand or what happened wound (Rosita et al., 2023) .

Observation results Patients who experience phlebitis occur at any age more from >60 years. According to (Sukadiono & Aziz Alimul Hidayat, 2020) on age carry on more from 60 years veins become fragile , no elastic and easy lost (collapsed). Age is level developments that occur size ability individual in active and appropriate with function physiological. Researcher assuming veins can become more weak along with increase age, patient take care stay period length also becomes reason patient in a way exclusive do activity it's in place affecting sleep mobility catheter intravenous, causes puddle blood in the vessels blood and will cause occurrence of phlebitis. Study (Salma et al., 2019) entitled Frequency of Peripheral Intravenous Catheter Related Phlebitis and Related Risk Factors: A Prospective Study states that phlebitis is incident common frequently happen consequence from installation infusion, and the incidence of phlebitis increases occurs in women , age , >60 years , number installation , and size catheter installed infusion .

Analysis Connection Obedience Nurse in Implement Standard Procedure Operational (SPO) Installation Infusion with Phlebitis Occurrence. Research result show that of 22 nurses and 22 patients, 2 nurses (9%) did not obedient in carry out installation SOP infusion There were 2 (9%) patients who experienced phlebitis, and 20 (91%) nurses were compliant carry out installation SOP infusion There were 4 (18%) patients who experienced phlebitis. Results of data analysis with using the chi-square statistical test, it was obtained results that mark significance $0.015 < 0.05$ which means there is connection obedience nurse in implement standard procedure operational (SPO) installation infusion with the incidence of phlebitis in the room take care stay. Study This in line with study (Kusumawati et al., 2022) that There is significant relationship between obedience nurse in installation infusion in accordance with SPO with signs of phlebitis with p value =0.013. Apart from that , research (China et al., 2022) based on results respondents who do 56 (73%) IV line treatment was performed maintenance according to SPO and 67 (88.2%) patients not phlebitis and with results chi-square test statistic 0.000 which means there is connection between level obedience nurse in implementation standard procedure operational (SPO) IV line treatment with occurrence of phlebitis.

Obedience nurse is part from behavior obedient individual will recommendations, procedures nor regulation in matter This obedient with standard procedure operational giving infusion fluids/electrolytes. Standard procedure operational is a procedure or steps to be taken and what should be done passed for complete the work process certain. Research result show that in obedient nurses carry out installation SOPs infusion phlebitis occurs in patients, researchers assume signs of phlebitis appear more dominant in disease certain, based on experience researcher patient with condition disease consequence infection own more potential big phlebitis, diabetes mellitus, disease occurs with rate high levels of bacteria in the blood makes it easier happen reaction inflammation at the insertion site infusion.

The incidence of phlebitis in respondents many appeared on the day maintenance third, based on standard procedure operational House Sick replacement insertion infusion on the day third maintenance or when phlebitis occurs In accordance with study (Alloubani1 et al., 2019) that replacement hose infusion i.e. 72 hours after installation . Although thereby Still need observation and care advanced for

know replacement with range 72-96 hours for consideration minimize painful patient, burden cost operations, and expenses Work nurse. Researcher assume that signs of phlebitis appear Lots found oada day maintenance third Because a number of reason reviewed from factor mechanical phlebitis can appear consequence movement patient. Activities carried out patient patient like eating, changing clothes, mobilizing, and so on involve movement extremities attached patient infusion, of activity that is possible appear traces that are No on purpose bring up point damage insertion.

Majority respondents did installation infusion in accordance with SPO no show signs of phlebitis that appear, meanwhile respondents did installation infusion not enough in accordance with SPO experienced signs of phlebitis. There is a relationship between obedience installation infusion with occurrence of internal phlebitis study This strengthened exists Internal factors namely age respondent, vein condition, factors diseases and factors external namely installation time, location installation, and size of the vein administered. According to (Octaviani et al., 2023) factor reason of phlebitis consists from Internal and external factors are included Internal causes of phlebitis are age , nutritional status , stress, vein condition , factors disease attached patient infusion as well as type sex . Whereas factor external consists of 3 types that is factor chemistry, factors mechanical and bacterial factors.

Accuracy nurse in implementing SOPs is reject measuring success service care provided to Society. Professional nurses are confident and responsible to services provided. Based on existing data obtained that obedience nurse in run it standard procedure operational with appropriate No will causes phlebitis.

CONCLUSION

Based on results research and description discussion study on obtained conclusion that Most of the obedience implementation of installation SOPs infusion carried out nurse at RSI Mabarro MWC Bungah is appropriate; Most of the attached patient infusion at RSI Mabarro MWC NU Bungah No have phlebitis; There is connection obedience implementation of installation SOPs infusion with the incidence of phlebitis in patients in the room take care stay at RSI Mabarro MWC NU Bungah; Nurse with installation SPO compliance infusion done with obedient so will lower amount the incidence of phlebitis in patients

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