

USE OF PERSONAL PROTECTIVE EQUIPMENT (PPE) AND EVENTS PHLEBITIS

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ABSTRACT

There are still many incidents of infection phlebitis during the home care process. Sick to patients and staff p This describes quality service. House less pain. Incident phlebitis is caused by one of the reasons for not using PPE by the standard. Research purposes: To analyze the level of compliance with the use of PPE in nurses who have had incidents of phlebitis in the Hospital. Types of research This analytic design uses a cross-sectional method. Population in the study: There were 108 nurses in the Hospital and 52 samples. The sampling technique uses simple random sampling. Data collection methods are interviews and observations. The cross-tabulation results showed that respondents who complied with the use of PPE were 20 (38.5%), and respondents who did not adhere to the use of PPE were 8 (15.4%). Obtained P value = 0.001, there is a connection between compliance with the use of PPE in nurses and incident Phlebitis in the Hospital. Expected Hospitals carry out socialization about the routine use of PPE and monitor evaluations once a month regarding the implementation of compliance with the use of PPE; health workers should be obedient in using PPE and carry out work per existing standard operational procedures.

Keywords: Compliance, PPE, Infection nosocomial (HAIs)

1. INTRODUCTION

To ensure that employees are still healthy and not sick, the manager's place Work must make all efforts to provide health, including preventing disease, increasing health, handling illness, and recovering employees. (Bando et al., 2020) One of the reasons for primary increased morbidity and mortality is infection nosocomial, which can hinder the healing process. Patients treated at home experience phlebitis, an HAI infection caused by microorganisms. The symptoms appear at least three times a day. (Sri Handayani; Burhaniddin Nur Susanto; Nur Wulan Agustina; Ratna Agustiningrum, 2022)

Associated infections with service health (HAIs) are an infection that occurs during home care or facility healthcare where the patient is not infected the moment they enter, including emerging infections after the patient goes home from treatment and infection attacks officer health moment they work there. (Rismayanti, 2019)

Hospitals are considered to fulfill standard minimum home service Sick If the prevalence of HAI infections is less than or The same as 1.5%. If the prevalence of infection phlebitis is high, permission for operational House Sick is revoked Because of poor quality service. (Reno Afriza Neri;

Yuniar Lestari; Husna Yetti, 2018; Retnawati et al., 2024)

The infection-related service health in Indonesia is still high, reaching 50.11% in government hospitals and 32.70% in private hospitals, while in developed countries, it ranges between 3.5% and 12%. Incidence rate *HAI*s in Indonesia were obtained from a survey of 10 general teaching hospitals. The number of incident *O*'s is 6-16%, with an average of 9.8%.(Chairani et al., 2022)

Disease phlebitis can be caused by many matters. Some of them are the procedure procedure-poor aseptic, which can cause contamination microorganisms during installation infusion; the size of the catheter is not by veins; time long cannulation, and not using PPE per standard. System management safety and health Work requires lots of hierarchy control, like deletion, replacement, technical supervision, system warning, administrative supervision, and use of PPE.(Rara & Fibriana, 2020)

Factors affecting incident phlebitis include the installation process infusion, So nurses need to evaluate installation infusion in patients to prevent phlebitis.(Sijabat et al., 2021) PPE is an effort To protect power. Work from control administrative and engineering is not practical. PPE is a tool that can defend somebody from potential workplace hazards. (Mallapiang & Septiani, 2019) Noncompliance with the importance of PPE for power nurses causes many cases of infection by pathogens.

The incidence of phlebitis is very high because of action invasive like nurses who don't wear protective PPE hand moment

installation infusion. Nurses can reduce this incident by entering principal safety patients to in-service them.(Batubara et al., 2021)

Study results were introduced with an interview on December 27, 2023, and data was obtained from several infection *HAI*s that happen at home sick; incident phlebitis is the disease with the highest incidence experienced by patients during treatment. Incidence rate *HAI*s in Hospitals from January to November 2023 is as follows: January 5.1‰, February 5.1‰, March 3.6‰, April 3.6‰, May 5.3‰, June 5.1‰, July 6.2‰, August 6.1‰, September 6‰, October 6.8‰, and November 6.6‰. From the observation of the results against five nurses, three nurses were obtained to use a pair of sarong hands at the moment of action install infusion, one nurse did not use sarong hand at the moment of repair infusion stuck patient, and one nurse No use sarong hand at the moment do action install infusion. After three days of evaluation, patients who installed infusion no-use sarong hand at the time experienced phlebitis.

Study This is important because it can give information about the level of compliance in using PPE in nurses' use to prevent and reduce the risk of infection. Material evaluation for the nurse prioritizes safety and health Work in carrying out duties, especially in using appropriate PPE with standard operational procedure. So, based on its urgency and problem, the research above is an objective study. To analyze the level of compliance with the use of PPE in nurses who have had incidents of phlebitis in the Hospital.

2. RESEARCH METHODS

Types of research This is analytic with a cross-sectional design method. Variable independent in study This is compliance with PPE, and the dependent variable is incident phlebitis. A population that is nurses at Karya Hospital Husada Cikampek Karawang as many as 108 nurses and as many as 52 samples. The sampling technique uses simple random sampling. Data collection methods are interviews and observations. Data analysis uses statistical correlation tests, such as *chi-square*. Research time was carried out in January 2024. The inclusion criteria in this study were nurses performing invasive procedures, and the exclusion criteria were nurses who worked in outpatient clinics. With number permission, Ethics 150/B/STIKes Crb /IX/2023 has been awarded by the Research Institute Development and Service to the Community of the Cirebon College of Health Sciences.

3. RESEARCH RESULT

Table 1. Distribution Frequency Compliance PPE Use and Events Phlebitis

Variable	Amount	
	(F)	(%)
Use of PPE		
Not obey	32	61.5
Obedient	20	38.5
Incident Phlebitis		
Phlebitis	24	46.2
No Phlebitis	28	53.8
Total	52	100

Based on Table 1. above obtained compliance respondents with partial use of PPE significant respondents Not obedient in using

PPE, i.e., as many as 32 respondents (61.5%), incident phlebitis as many as 24 cases (46.2%), and those that did not happen phlebitis as many as 28 cases (53.8%).

Table 2. Relationship between levels of compliance Use of PPE with Incident Phlebitis

Compliance P Value	Phlebitis				Amount		
	Phlebitis		No Phlebitis		n	%	
	n	%	n	%			
Not suitable	24	46.2	8	15.4	32	61.5	0.001
Obedient	0	0.00	20	38.5	20	38.5	
Total	24	53.8	28	46.2	52	100.0	

Table 2. obtained results that respondents who did not obey the use of partial PPE experienced phlebitis in as many as 24 (46.2%), and respondents who were compliant part extensive No experienced phlebitis in as many as 20 (38.5%). The statistical test results obtained P Value = 0.001; then, there is a connection between compliance with the use of PPE in nurses and incident Phlebitis in the Hospital.

4. DISCUSSION

Research results There is a connection between compliance with the use of PPE in nurses with incident phlebitis in Hospital; an acquired mark *P value* of 0.001, in line with Ajeng's research (2018), found that the use of PPE (p-value = 0.001) was related to the incidence of phlebitis in hospital inpatients. (Kurniawati & Imaniati, 2018) The most influential variable in preventing nosocomial infections

is using PPE, with a value of 25.824. (Rahmatilah & Jamaluddin, 2020). Factors associated with nosocomial infections are the use of PPE (p value=0.011) and the need for hospitals to pay more attention to the availability of PPE to prevent nosocomial infections. (Erma Kasumayanti, 2017)

Based on data, medical staff's actions in not using sterile PPE often cause phlebitis. (Hidayat et al., 2020) Compliance is when level behavior officers focus on instructions or instructions given through practice, fine-in-procedure action, or others. (Nursihhah et al., 2021) The use of nurses' PPE amounted to 62.07%, and the availability of PPE in hospitals was sufficient, so counseling about PPE's benefits for increased awareness and supervision was required to prevent nosocomial infections. (Zubaidah & Afiat J Yudha; Arifin, 2015)

The implementation of PPE in hospitals was found to be poor; the implementation of PPE is essential for health workers, especially nurses when carrying out medical procedures to avoid the occurrence of nosocomial infections. (Solehudin Solehudin et al., 2024) Compliance with the use of PPE among health workers is poor at 43.8%, and it is hoped that hospitals and health workers will continue to increase their knowledge of the use of PPE in hospitals. (Delima et al., 2022) PPE protects officers and patients from microorganisms on-site in health care. (Apriluana et al., 2016)

Availability of PPE for at-home pain and motivation Nurses are very influential in preventing infection. Prevention of infection relies heavily on compliance nurses regarding PPE for obeying and

protecting them from diseases that occur in hospitals. (Syaripudin et al., 2024) They were increasing the knowledge of nurses to understand PPE better. Apart from knowing and understanding it, they also implement it well and use PPE correctly to avoid all threats of danger while working. (Andi Nailah Amirullah et al., 2022)

Standard protocol installation infusion peripheral Not yet implemented with suitable in space take care stay For prevent phlebitis. Possible efforts to reduce incident phlebitis in space take care of hospital stays, namely improve monitoring programs in the work program prevention and control infection, apply procedure installation infusion, and do evaluation compliance implementation cleanliness hand. (Kurniawati & Imaniati, 2018) Medical personnel's compliance with PPE still needs to be improved through socialization and regular supervision to protect against the risk of infection transmission in hospitals. (Dewi et al., 2019) The Hospital expects to reduce nosocomial infection by providing counseling, completing PPE, routine supervision, and rewards to compliant staff. (Uswatun Khasanah et al., 2023)

Compliance use of PPE in research: as many as 32 respondents (61.5%) did not obey PPE from 52 respondents. Many respondents did not obediently use PPE, which shows that the party House Sick did not apply disciplined efforts in safety and health work for the officers. These efforts are insufficient for socialization, monitoring, and evaluating compliance with PPE.

5. CONCLUSION

Compliance respondents in use of PPE Most respondents No obedient in using PPE, i.e., as many as 32 respondents (61.5%), incident phlebitis as many as 24 cases (46.2%) and those that did not happen phlebitis as many as 28 cases (53.8%). Obtained P Value = 0.001, there is a connection between compliance with the use of PPE in nurses and incident Phlebitis in the Hospital. It is hoped that hospitals will socialize about the routine use of PPE, always have personal protective equipment available and in good condition, and monitor and evaluate once a month regarding the implementation of compliance with the use of PPE. Health workers should be obedient in using PPE and carry out work according to existing standard operational procedures.

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