Monitor IPCLNs Regarding Nurses' Performance in Preventing Nosocomial Infections

Nur Wahida[1], Rahayu Iskandar[2*]

[1]Student, Departement of Nursing, Faculty of Health, University of Jenderal Achmad Yani Yogyakarta, Indonesia)
[2]Lecturer, Departement of Nursing, Faculty of Health, University of Jenderal Achmad Yani Yogyakarta, Indonesia)
Email: nurwahidaa38@gmail.com, rahayuaza333@gmail.com

*corresponding author

ABSTRACT

Backgroud: In the professional practice of nursing, supervision is the process that provides nurses with the many tools they need to carry out their work in order to achieve the goals of the organization. Nursing supervision is part of nursing management, which focuses on nurses' competencies and skills in the delivery of nursing care to patients and families. In an effort to improve service quality and prevent hospital-acquired infections, supervision is critical.

Objective: This study aims to determine the correlation between implementation of supervision and performance of implementing nurses in preventing nosocomial infections in regional public hospital Nyi Ageng Serang Kulon Progo.

Methods: Correlational descriptive research with cross-sectional approach. The population in this study is all practicing nurses in the inpatient ward class III in regional public hospital Nyi Ageng Serang Kulon Progo. Total sampling is used as the data collection method.

Result: The results show that most of the nurses perceived the implementation of supervision by Infection Prevention and Control Nurse (IPCLN) in the category as much 27 (69.2%) nurses. The performance of implementing nurses in preventing the incidence of nosocomial infections in the less optimal category is 18 (46.2%) nurses. Bivariate test results obtained p-value=0.202 by r=0.200

Summary: There is no correlation between the implementation of supervision and the performance of nursing staff in the prevention of nosocomial infections.

ARTICLE INFO

1. Introduction

Hospitals are places for the provision of health services that are required to provide comprehensive health care to patients and play an important role in efforts to improve the overall health status of individuals, including promotive, preventive, curative and rehabilitative efforts. While hospitals are places where illness people are cured, they can be a source of infection for patients, visiting families and health care workers. [1] Hospital services are vulnerable to various problems, threats, and clinical risks, one of which is the spread of nosocomial infections. [2]

Nosocomial infections are infections acquired by patients during hospitalisation. The World Health Organization (WHO) suggests that 15% of the total number of hospitalised patients experience Health Care Associated Infection (HAIs) with the incidence rate in Southeast Asia and Sub-Saharan Africa reaching 75% where as much as 4-56% is the cause of neonatal mortality. [3] The prevalence of HAIs in Indonesia is 15.74%, while in developed countries it ranges from 4.8% to 15.5%. [4] The results of a survey conducted in the Internal Room of one of the hospitals in South Sorong Regency in 2019 found 25 cases of nosocomial infections consisting of 1 case of pneumonia, 2 cases of decubitus, and 22 cases of phlebitis. [5]

Nosocomial infections have become one of the emerging health problems in developed and developing countries, causing increased morbidity and mortality in hospitals. [6] The incidence of nosocomial infections can have an impact on patients, families and healthcare institutions. For patients, nosocomial infections can lead to increased morbidity and mortality, increased costs and length of hospital stay, and increased use of healthcare services and other medications. While the impact on hospital institutions is the existence of lawsuits and lowering the image of the hospital. [1]

Nosocomial infections in patients can be caused by many factors. Nursing factors include not following Standard Operating Procedures (SOPs) when caring for patients and not washing hands properly before and after administering procedures to patients. [7] Nurse performance is the result of nursing services, determines the quality of health services and determines the image of health care institutions. [8] Education, motivation, training, length of service, gender and age influence nurses' performance in preventing healthcare associated infections. [6] Meanwhile, Setiawan et al (2020) said that factors that can affect nurses' performance in preventing nosocomial infections are knowledge, attitudes, socialisation, facilities, and supervision.

Quality care is demonstrated through the provision of professional services. [9]. Professional services must be supported by quality human resources, service standards, quality services, in addition to facilities that are in accordance with community expectations. To fulfil the applicable standards and consumer expectations of nursing services, it is necessary to carry out supervision.

Nursing supervision is part of nursing management that focuses on the ability, skills of nurses in providing nursing care to clients and families. Supervision is very important as an effort to improve the quality of service and prevention of infection in hospitals. One of the management functions is supervision of compliance with the implementation of Standard Precaution. The officer responsible for supervising compliance with Standard Precaution in the hospital is the Infection Prevention and Control Nurse (IPCN) and is assisted by each IPCLN in the room. IPCLN is an executive nurse in the ward who has attended Infection Prevention and Management (IPM) training, working as an auditor, motivator and supervisor of the IPM programme in the ward. The criteria for becoming an IPCLN officer are being interested in infection control and prevention programmes, having a minimum education of D-3 nurse, having attended certified IPM training and having a minimum working period of 2 years.

Research conducted at the Kulon Progo Regional Government Hospital found that out of 48 nurses only 43.8% were compliant in implementing hand washing SOP and 56.3% were not compliant in implementing hand washing SOP. The results of interviews and observations showed that 8 nurses who were in contact with patients were 37.5% of nurses who did not wash their hands properly and correctly in accordance with the SOP and there were many more nurses who did not wash their hands before contact with patients. [10]

This study used an IPCLN supervision questionnaire adopted from Rusdi et al., (2022) which consists of 26 statement items related to IPCLN supervision including hand hygiene, personal protective equipment (PPE), decontamination of patient equipment, environmental health, waste management, linen management, officer health protection, patient placement, respiratory hygine / cough and sneeze ethics, and safe injection practices.

The results of a preliminary study at the Kulon Progo Regional Government Hospital found that the incidence of nosocomial infections in 2022 with an average incidence of Urinary Tract Infection (UTI) of 1.5 per year, Plebitis 0.16 per year, and the incidence of Surgical Wound Infection as much as 0.83 per year. Based on this data, it can be concluded that the highest incidence of nosocomial infections is Urinary Tract Infection (UTI) as much as 1.5 per year. Based on this, the problem formulations in this study are whether IPCLN supervision has an impact on nurses' performance in the prevention of nosocomial infections?.

2. Method

This study is a descriptive correlation study with a Cross Sectional approach. The population of this study were all executive nurses in class III inpatient rooms of Nyi Ageng Serang Hospital at Kulon Progo. This research was conducted in April-May 2023. with a sample size of 39.

The instrument used the IPCLN Supervision questionnaire and the Standard Precaution questionnaire. The nursing supervision questionnaire was adopted from the IPCLN supervision research instrument used by Rusdi et al., (2022) with a calculated r value (0.374-1.00) greater than the r table (r = 0.365). the results of the questionnaire reliability test using Cronbach Alpha obtained an alpha value (α) of 0.947. [19] Data in this study were presented in the form of frequencies and percentages. Relationship analysis using somers'd test.

3. Results and Discussion

3.1. Results

The results of univariate analysis obtained the following results:

Table 1. Frequency Distribution of Respondents' Characteristics (n=39)

Sex	Frequency	Percentage (%)
Man	9	23,1
Woman	30	76,9
Total	**39**	**100**
Age	**Frequency**	**Percentage (%)**
20-30 years old	28	71,8
31-40 years old	9	23,1
41-50 years old	1	2,6
51-60 years old	1	2,6
Total	**39**	**100**
Latest Education	**Frequency**	**Percentage (%)**
Diploma-3	36	92,3
Bachelor of Ners	3	7,7
Total	**39**	**100**
Length of Employment	**Frequency**	**Percentage (%)**
<5 years	16	41,0
>5 years	23	59,0
Total	**39**	**100**

Source: primary data 2023

The results showed that respondents were dominated by women (76.9%) with ages ranging from 20-30 years (71.8%), the average education was Diploma-3 Nursing (92.3%) and respondents had worked for more than 5 years (59.0%).

Table 2. Nurses' Perception of the Implementation of IPCLN Supervision (n=39)

IPCLN Supervision	Frequency	Percentage (%)
Good	27	69,2
Poor	12	30,8
Total	**39**	**100**

Source: primary data 2023

The results showed that the majority of the nursing staff (69.2%) perceived the implementation of supervision by the IPCLN to be in the good category.

Table 3. Nurse Performance in Preventing Nosocomial Infections (n=39)

Nurse Performance	Frequency	Percentage (%)
Poor Compliance	12	30,8
Suboptimal Compliance	18	46,2
Satisfactory Compliance	9	23,1
Total	**39**	**100**

Source: primary data 2023

Analysis showed that 46.2% of the 39 nurses surveyed were suboptimal in preventing nosocomial infections.

Table 4. Relationship between the Implementation of Supervision by IPCLN and the Performance of Implementing Nurses in Preventing Nosocomial Infection Events (n=39)

Supervisi IPCLN	Kinerja Perawat Pelaksana						Total		p-value
	Poor Compliance		Suboptimal Compliance		Satisfactory Compliance				
	F	%	F	%	F	%	F	%	
Good Supervision	9	33,3%	14	51,9%	4	14,8%	27	100%	**0,202**
Poor Supervision	3	25,0%	4	33,3%	5	41,7%	12	100%	
Total	**12**	**30,8%**	**18**	**46,2%**	**9**	**23,1%**	**39**	**100%**	

The results of the bivariate test using the Somers'd test obtained a p-value of 0.202 which means that there is no relationship between IPCLN supervision and nurse performance in preventing nosocomial infections at Nyi Ageng Serang Kulon Progo Hospital.

3.2 Discussion

Research conducted by Dachirin et al., (2019) shows that supervision affects the performance of executive nurses in preventing nosocomial infections. [11] Whereas in this study it was found that most of the executive nurses perceived the implementation of supervision by IPCLN in the good category, but nurse compliance in preventing nosocomial infections in hospitals was mostly in the suboptimal category. There are several factors that can affect a person's perception, one of which is feeling. Supervised nurses are sometimes reluctant to give poor judgement to supervising nurses who are fellow professionals. Thoha in his book said that one of the factors that can affect a person's

perception is feelings, because feelings or interpersonal relationships can affect the assessment given by the implementing nurse to the supervision of IPCLN.

This study is in accordance with that obtained by Daryati et al., (2020) who found no relationship between the implementation of IPCN supervision and nurse compliance in implementing SOP Universal Precaution at RSUD dr. Soediran Mangun Soemarso with a p-value of 0.229. The results of this study are also reinforced by research conducted by Basuni et al., (2019) which states that there is no relationship between the implementation of supervision and the perception of nurse practice in implementing Universal Precaution for infection prevention (p-value 0.384).

Management support and hospital policies are other factors that influence nurses' performance in preventing nosocomial infections. Hospital management can improve nurses' compliance with standard precautions by providing regular training and information upgrades to nurses regarding standard precautions, transmission of infectious diseases, and reporting of workplace accidents. [15] Nurses with good supervision will behave and try to improve their role in the prevention of nosocomial infections; the direction, guidance, observation and evaluation received from managers will increase the awareness and compliance of nurses to always act on the basis of the standard of precautions in accordance with hospital's SOP. [16]

Geller (2001) says that to establish a safety culture there are three components that must be achieved and interconnected with each other, namely, environment (equipment, standard procedures, etc.), behavioural factors (training, supervision, etc.) and people/person factors (knowledge, skills, abilities, attitudes and motivation). [17] The perception of nosocomial infection prevention performance by executive nurses at Nyi Ageng Serang Kulon Progo Hospital that is still low is the use of surgical masks combined with the use of glasses, face shields, and aprons when performing actions on patients that have the potential to cause splashes to nurses. When viewed from the supervision questionnaire conducted by IPCLN regarding the use of Personal Protective Equipment (PPE), supervision by IPCLN is perceived to have been carried out well. However, due to the lack of awareness of personal safety, nurses only use gloves, masks, and gowns as personal protective equipment when performing actions that have the risk of being splashed by patients.

Further analysis showed a low mean value for the use of alcohol for disinfecting. This is because washing hands with soap and running water is more effective in removing germs than just using alcohol. In line with the research of Cordita et al., (2019) related to the comparison of the effectiveness of washing hands using hand sanitizer with antiseptic soap on Health Workers in the ICU Room of RSUD DR. H. Abdul Moeloek, it was found that there was a difference in the effectiveness of washing hands using hand sanitizer with antiseptic liquid soap. In reducing the number of germs antiseptic liquid soap is more effective than hand sanitizer. The highest mean value is in the use of masks. This is because nurses have been accustomed to using masks since the COVID-19 pandemic, the availability of supporting facilities in the form of the availability of medical masks in each ward, and a good supervision system by IPCLN in the use of masks are factors in the high compliance of nurses in using masks..

The results of this study are in line with research conducted at Sari Asih Serang Hospital, Banten Province, which shows a relationship between the availability of Personal Protective Equipment (gloves and masks) when performing nursing actions (Pvalue = 0.003), and there is a relationship between the supervision factor with nurse compliance using PPE (gloves and masks) when performing nursing actions (Pvalue = 0.02). [18]

4. Conclusion

The researcher concluded that most of the executive nurses perceived the implementation of IPCLN supervision in the good category, most of the performance of executive nurses in preventing nosocomial infections in the suboptimal category, and there was no relationship between the implementation of supervision and the performance of executive nurses in preventing nosocomial infections. Nyi Ageng Serang Kulon Progo Hospital is expected to improve the skills of implementing nurses in nosocomial infection control in the hospital through a nosocomial infection

prevention seminar programme and conduct training and evaluation every month for IPCLN officers in the hospital.

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