

ORIGINAL ARTICLE

OPTIMIZATION OF THE ROLES AND RESPONSIBILITIES OF INFECTION PREVENTION AND CONTROL NURSE IN HOSPITAL

Marthalena Siahaan¹, Hanny Handiyani², Nurdiana³

1 Post Graduate Student, Universitas Indonesia

2 Departement Basic Science and Fundamental Nursing, Universitas Indonesia

3 Departement of Nursing, RSUPN Dr. Cipto Mangunkusumo Jakarta

* Correspondence: marthasiahaan102085@gmail.com

Abstract

Infection Prevention and Control Nurse (IPCN) has an essential role in preventing and controlling infections in hospitals. IPCN's role has been developed to optimize the prevention and monitoring of infection in hospitals. Some countries such as Korea, the United Kingdom, Ireland have developed graduate program nurse control specialists by obtained needs for particular science that can deal with hospital conditions, specifically related to the prevention of infection and care of infectious patients. This case study aims to identify and analyze IPCN's optimization of IPCN in conducting infection prevention and control in a government hospital in Jakarta, which is also a national referral center hospital. Data collection was done by observing the daily activity of the IPCN, reviewing IPCN's role by focus group discussion with nine out of ten IPCNs, and interviewing the nurse committees and director of nursing. The results obtained indicate that the implementation of the functions and roles of IPCN cannot be carried out maximally. This is because, in addition to serving as IPCN, IPCN was also involved in the activities carried out by the unit as well as the implementation of wide surveillance hospitals by the Hospital Infection Control Committee (HICC). It is recommended to optimize the implementation of the functions and roles of the IPCN through the establishment of IPCN competency guidelines aimed at improving IPCN competency standards now and in the future, as well as guiding the determination of IPCN's duties and responsibilities to be more maximal in preventing and controlling infections.

Keywords: Hand Hygiene, IPCN, Infection Prevention, and Control, Infection Control

International Journal of Nursing and Health Services (IJNHS), December 2019, Volume 2, Issue 4; Page 292-306
Received: 09 April 2019; Revised: 11 June 2019; Accepted: 18 June 2019
DOI 10.35654/ijnhs.v2i4.116

Introduction

Infection Prevention and Control Nurse (IPCN) is one of the staff in a hospital who plays an important role in ensuring the success of an infection prevention and control (IPC) program in a hospital. The policy of the Indonesian government (1) states that IPCN is a member of the hospital infection prevention and control committee and working full time to carry on the IPC program. An IPCN must have the competence to monitor and supervise all IPC activities, which are obtained through education, training, work experience, or certification (2).

Infection Prevention and Control Nurse (IPCN), through its function and roles, has a responsibility in reducing the incidence of infections in hospitals. Studies conducted in hospitals in Japan show a relationship between the effectiveness of the IPC program to reduce the number of patients suffering from MRSA (3). Another study states that through good collaboration between IPC officers and perioperative officers (both doctors,

nurses) in carrying out and innovating IPC programs have succeeded in reducing the incidence of surgical wound infections (4). This also shows that if IPCN performs well, the IPC program implemented is able to achieve the expected goal of reducing the incidence of infection in hospitals.

The success of reducing the number of infections in hospitals besides being influenced by the performance of IPCN was also influenced by the support and cooperation of the hospital management. Types of hospitals (government vs. private, large vs. small), availability of facilities (self-capacity rooms for isolated patients) and IPC policies, hospital infrastructure, and hospital designs affect the effectiveness of IPC programs (5,6). The application of policies to the use of antibiotics and isolation of MRSA patients is known to have a relationship to a decrease in the number of MRSA patients (7). Research in the UK found that the decision of the hospital management to limit the IPC program only covered specific areas that would cause potential risks of emerging new problems related to infection control (8).

Other factors that influence the successful implementation of the IPC program are individual health worker factors, such as competence and compliance in conducting an IPC program. The study mentions the importance of providing nurses who are competent in evaluating the possibility of infection (9). Compliance with health workers in implementing hand hygiene is known to reduce infections related to health services (37.2 pre-intervention to 15.1 post-intervention); bloodstream infections (18.6 to 3.4 per 1000 central line-days); lower respiratory tract infections (17.6 to 5.2 per 1000 ventilator-days); also decreased use of isolation rooms in 4 hospitals focusing on pathogenic diseases (10).

Some studies have found that health worker factors, namely adherence to conducting an IPC program, is one of the factors that influence the success of the IPC program at the hospital. Compliance with applying bundle care related to urinary catheter placement found a decrease in infections related to urinary catheter insertion of 22.7% (3.86 to 2.98 per 1000 catheter-days) (11); Other studies in Saudi Arabia also concluded that individual factors related to health care workers' inadequacies, inadequacy, and inability of officers and lack of infection control training were the causes of significant hospital outbreaks, including Middle East Coronavirus Respiratory Syndrome (MERS-CoV) infection (5). Research conducted in Indonesia states that the factors that influence the compliance of nurses to implementing the IPC program are influenced by the head nurse function of organizing and have never or never participated in IPC training (12).

The success of the IPC program in reducing the incidence of infection is also influenced by individual IPCN factors. Mega survey conducted by The Association of Professionals in Infection Control and Epidemiology (APIC) in 2015 toward 4709 members showed that the majority of IPC officers rated themselves at the expert level in preventing/ controlling transmission of infectious agent components/ HAI's (40%), beginner level in occupational health (29%); hygiene, sterilization, disinfection and asepsis (23%); and education and research categories (22%) (13). IPCN has different levels and abilities depending on age, working experience as a nurse, working experience as an IPCN, number of beds, knowledge of infection control, and education followed (training, conference) (14). This indicates the need to further improve the capabilities of IPC officers, especially IPCN, as full-time IPC officers in hospitals in Indonesia.

Objectives

The study aimed to identify and analyze IPCN's optimization of IPCN in conducting infection prevention and control in a government hospital in Jakarta which is also a national referral center hospital

Methods

Data collection was conducted by observing the daily activity of the IPCN, reviewing IPCN's role by focus group discussion with nine out of ten IPCNs, and interviewing the nurse committees and director of nursing. The results of the problem findings are analyzed using SWOT analyzing to determine the priority of problems faced by IPCN in carrying out their functions and roles as prevention and control of infection.

This study found 6 problems that contributed to the non-optimal role and function of IPCN. These problems are analyzed and sorted by weighing the value (1 to 5) on Frequent occurrence of the issues (Mg), The number of losses incurred (Sv), Can be solved (Mn), Focusing on nursing (Nc), and Availability of resources (Af). Each value of each aspect is multiplied so that it gets the final value (score). The scores obtained are then ranked to see the order of causes that are not optimal in carrying out their roles and functions.

The results obtained indicate that the most priority problem is IPCN lacks the support of the unit in maximizing functions and roles (the unit is less compliant, the limitations of the tools/ materials needed to implement the IPC program, IPCN links are not optimal in carrying out their duties).

Results

The implementation of the functions and roles of IPCN in Jakarta X Hospital is not yet optimal. This happened because, in addition to serving as IPCN, IPCN was also involved in the activities carried out by the unit as well as the implementation of wide surveillance hospitals by the Hospital Infection Control Committee (HICC). Based on observations of the daily activities carried out by IPCN, IPCN activities include the following:

1. Follow the pre-conference in HICC's room. This is done as a form of coordination by the HICC to report on the activities that have been carried out (evaluation of team or personal activities) and activities to be carried out that day (team and personal).
2. Following a routine and incidental unit activities, such as management rounds conducted to evaluate a room in the unit and management meeting in the unit.
3. Conduct routine HICC's activities, such as monthly HICC's meeting attended by all units; IPC training to nurses staff; seminars/ workshops related to IPC that are open to medical staff from various hospitals; and a roadshow to each unit to remind officers of IPC Standard Operational Procedure (SOPs).
4. Conduct HICC's meetings to make programs and annual evaluations.
5. Visit the room alternately in the area of responsibility for IPCN.

The activities carried out by the IPCN, some of which require a long preparation process, so it is not uncommon when IPCN is spent more on preparation. The routine activities of the IPCN are carried out by assigning the person in charge of activities in turn between each IPCN. Based on observations made through the activities of IPCN visits to the units which are the areas of responsibility, IPCN brought several checklists to be filled in when conducting audits in the unit. IPCN conducts handwashing compliance audits,

controls the unit environment and records findings found during the visit to be reported to HICC or immediately followed up to the head of the room/ unit in charge.

These findings include staff behavior in implementing IPC, environmental hygiene, waste management, and so on. Findings that require corrective action are immediately corrected by the IPCN by giving a warning to the officer/ person in charge. While the conclusions that need a solution, IPCN directly provides solutions to existing problems. However, if the results are a problem that requires follow-up, IPCN conducts monitoring according to the procedures and reports necessary to HICC.

Focus group discussions conducted to determine the description of the implementation of the functions and roles of IPCN; it was found that there were several obstacles in the implementation of infection prevention and control programs:

1. Factors of IPCN. IPCN cannot implement all expected competencies by the established standards, namely government standards contained in PMK No. 27 of 2017 concerning guidelines for implementing IPC. The implementation of functions and roles carried out by the work area received different responses from doctors, room heads, and deploying nurses. The stigma that IPCN as a "germ police" and only conducting surveillance is still found, so it tends to be avoided and not considered necessary. IPCN is also required to perform an extensive surveillance hospital so that a lot of data is missed, and IPCN cannot focus on handling patient problems accurately.
2. Hospital management policies. The implementation of the system on "Quality Control and Cost Control" by the management of the hospital resulted in the inability of the unit to provide consumables and facilities for implementing IPC's programs. Examples include: providing inadequate plastic waste, providing non-continuous tissue, limiting hand soap so that the unit dilutes hand soap using water, which results in ineffectiveness in disinfecting. The policy of unit decentralization management also led to the occurrence of different strategies in the implementation of the principles of IPC. For example, a maintenance unit uses chlorine in cleaning the operating room, but other treatment units do not use chlorine

The results of interviews conducted with the nursing committee and director of nursing found that structurally the IPCN was not directly under the nursing department and thus could not directly control IPCN. Fulfillment of individual performance indicators, IPCN still has to fulfill its duties as a nurse, by the applicable career level competencies in the hospital and the competencies set by the nursing committee. The nursing committee and director of nursing believe that it is necessary to think about solutions so that IPCN continues to work professionally as a nurse and IPCN.

Identification of problems using SWOT analysis

| Function | Strenght | Weakness | Opportunity | Threat |
|-------------------|---|--|--|--|
| Planning | <ol style="list-style-type: none"> 1. Having vision, mission, values, and philosophy 2. Has a guide book, manual, and infection control SOP 3. Have an annual program HICC 4. Have an audit checklist to facilitate audit 5. Regular meetings of HICC (every month) attended by all units | <ol style="list-style-type: none"> 1. IPCN competency description does not yet exist 2. Recruitment is carried out not in accordance with the guidebook due to situation needs 3. The audit process is still manual, so there is a risk of missing data, late entry data | Cooperation with faculty of nursing Universitas Indonesia | The development of the disease and the need for hospital treatment so that it requires appropriate methods of prevention and infection control |
| Organizing | <ol style="list-style-type: none"> 1. Having a Director's Decree as IPCN 2. Have their respective work areas 3. Implementation of tasks is assisted by IPCN link 4. Coordinate with the Infection Prevention and Control Doctor (IPCD) of each treatment unit 5. The Pre-Conference Committee of HICC is conducted every day | <ol style="list-style-type: none"> 1. Responsible directly to the director so that sometimes there is less support from the unit 2. There are repeated findings, due to limited funds in the provision of tools/ materials needed, e.g., the tissue is gone 3. Method of hospital-wide surveillance so that a lot of data is missed 4. IPCN is tasked with recommending, implementing the unit so that the success of the IPCN program depends on the unit 5. IPCN links are not optimal in carrying out their duties because they are still acting as nurses 6. Obligated to attend unit meetings so that sometimes routine tasks are neglected | Use of technological developments to streamline and coordinate | The development of the disease and the need for hospital treatment so that it requires appropriate methods of prevention and infection control |

| | | | | |
|------------------|---|---|--|---|
| Staffing | <ol style="list-style-type: none"> 1. Has 10 IPCNs with Infection Prevention and Controlling certified 2. Bachelor education background 3. Have training in the primary and advanced level of IPC 4. Have staff development programs (seminars, workshops, benchmarking) 5. Having the ability as an educator | <ol style="list-style-type: none"> 1. The difference in the length of time working as an IPCN affects the unit's assessment of IPCN (Issue of authority) 2. Directors, related to financing rarely approve development programs | <ol style="list-style-type: none"> 1. There are training/ seminars/ workshops from various institutions 2. The openness of opportunity to benchmark to more advanced countries | <p>The development of the disease and the need for treatment of infections in hospitals is increasing</p> |
| Actuating | <ol style="list-style-type: none"> 1. Daily visits and supervision to the area of responsibility 2. Coordination with IPCN links, IPCD, and IPCO in monitoring areas of responsibility 3. Conduct an investigation into the outbreaks, report to HICC and jointly address the outbreaks 4. Carry out infection surveillance, germ patterns, needle stick punctures 5. Conduct IPC training on health workers 6. Provide motivation and reprimand about implementing Infection Prevention and Controlling compliance 7. Providing counseling for non-health officers, visitors, and | <ol style="list-style-type: none"> 1. The IPCN visit to the unit is considered an evaluator (germ police) 2. IPCN links are not optimal in carrying out their duties 3. IPCN is deemed to be fierce, unfriendly, and tends to be avoided | | |

| | | | | |
|--------------------|---|--|---|--|
| | families about Infection Prevention and Controlling | | | |
| | 8. Conduct a roadshow | | | |
| | 9. Follow the management's round, the committee for controlling antibiotic resistance's series, and complicated case rounds every week according to the work area | | | |
| Controlling | 1. Has a committee of HICC 2. Has individual performance indicators 3. Conduct daily audits (according to the annual program) 4. Monitor the implementation of IPC, implementation of SOP, awareness of isolation 5. Monitor environmental health, control the rational use of antibiotics 6. Make a surveillance report 7. Tracking the use of single-use and reuse devices and patients who use them 8. Monitoring the health of health workers to prevent transmission of infections from health workers to patients and vice versa | 1. Data audits are carried out not every day 2. Not all data can be audited every day 3. There are repeated findings, due to limited funds (in the provision of tools/ materials needed, e.g., the tissue is gone) | Use of technology in conducting audits and data entry | The development of the disease and the need for treatment of infections in hospitals is increasing |
| Roles | | | | |

| | | |
|----------------------|---|--|
| Interpersonal | <ol style="list-style-type: none"> 1. As a role model for units in implementing IPC 2. Become a representative of the group in attending activities related to IPC 3. Supervision, roadshows as a means of motivating groups in implementing Infection Prevention and Controlling programs 4. Building communication with other IPCNs (different groups) 5. As a representative of the group in conveying information regarding IPC to other units | <ol style="list-style-type: none"> 1. Some IPCNs are still classified as young, so they are not considered as figureheads or role models 2. The length of work as a different IPCN thus influences the appreciation/ collaboration with the unit 3. The presence of IPCN in the care room is always misunderstood as an evaluator |
| Informational | <ol style="list-style-type: none"> 1. Representing the unit (area of responsibility) in delivering data/ policies related to IPC either into the group or outside the unit 2. Coordinate with other groups through monthly coordination meetings, management rounds, the committee for controlling antibiotic resistance's rounds, difficult cases rounds 3. Delivering information/ policies to the unit according to their respective areas of responsibility | <p>Policies/ regulations submitted to the unit are not always obeyed</p> |
| Decisional | <ol style="list-style-type: none"> 1. Provide innovative ideas related to implement IPC | <ol style="list-style-type: none"> 1. Not all problems can be resolved properly, especially when it comes to financing |

-
- | | |
|---|---|
| 2. Providing solutions to the problems faced | 2. Not all IPCNs have been heard by the unit regarding age |
| 3. Coordinate with HICC team, directors or directors in making decisions that have a major impact | 3. The difference in the length of time working as IPCN affects performance |
| 4. Negotiate if needed as a representative of the unit | |
-

Problem Identification

Based on the SWOT analysis of the functions and roles of the IPCN, there can be found several problems related to IPCN, namely as follows:

1. Audit and surveillance are still manual, so there is a risk of missing data and late entry.
2. Inefficient collection and processing of data: hospital-wide surveillance methods so that a lot of data is missed.
3. IPCN lacks support from the unit in maximizing functions and roles (the unit is less compliant, the limitations of the tools/ materials needed to implement the IPC, IPCN links are not optimal in carrying out their duties).
4. IPCN's performance for the unit is not good (considered germ police, young age, work experience is still considered inadequate so it is not considered a figurehead or role model in IPC).
5. There are additional tasks (attending unit meetings) so that mandatory tasks are sometimes neglected.
6. The IPCN development program is very rare, related to financing.

After finding out the causes of the problem, then weighting the priority of the problem is done using the following weighting aspects:

1. Magnitude (Mg): Frequent occurrence of the issues
2. Severity (Sv): The number of losses incurred
3. Manageability (Mn): Can be solved
4. Nursing concern (Nc): Focusing on nursing
5. Affordability (Af): Availability of resources

The range of values used 1 to 5 with the following criteria:

Value 5: Very important

Value 4: Important

Value 3: Quite important

Value 2: Less important

Value 1: Very insignificant

Each value of each aspect is multiplied so that it gets the final value (score), which is the assessment of the cause of the problem. The purpose of the most priority problem is the cause of the problem with the most substantial amount.

The following table is shown the calculation table determines the priority of the problem based on the weighting aspects and the range of values.

| No | Problems | Mg | Sv | Mn | Nc | Af | Score | Rank |
|----|--|----|----|----|----|----|-------|------|
| 1 | The audit and surveillance is still a manual method, so there is a risk of missing data and late entry | 1 | 1 | 2 | 3 | 2 | 12 | VI |
| 2 | Inefficient collection and processing of data: hospital-wide surveillance method so that a lot of data is missed | 2 | 2 | 2 | 3 | 3 | 72 | IV |
| 3 | IPCN lacks the support of the unit in maximizing functions and roles (the unit is less compliant, the limitations of tools/ materials needed to implement the IPC programs, IPCN links are not optimal in carrying out their duties) | 5 | 4 | 5 | 5 | 4 | 2000 | I |
| 4 | IPCN's performance for the unit is not good (considered germ police, young age, work experience is still considered inadequate so it is not considered a figurehead or role model in IPC) | 4 | 3 | 5 | 4 | 5 | 1200 | II |
| 5 | Additional tasks (attending unit meetings) so that mandatory tasks are sometimes abandoned | 3 | 3 | 3 | 2 | 3 | 162 | III |
| 6 | The IPCN development program is very rare, related to financing | 2 | 2 | 2 | 2 | 2 | 32 | V |

Based on the table, the problems found can be sorted by the value obtained on each problem. The highest value is 2000, while the lowest value is 12. Based on that score, the causes of the problems identified can be prioritized as follows:

1. IPCN lacks the support of the unit in maximizing functions and roles (the unit is less compliant, the limitations of the tools/ materials needed to implement the IPC program, IPCN links are not optimal in carrying out their duties)
2. IPCN's performance for the unit is not good (considered germ police, young age, work experience is still considered inadequate so it is not considered a figurehead or role model to implement the IPC program)
3. There are additional tasks (attending unit meetings) so that mandatory tasks are sometimes neglected
4. Inefficient collection and processing of data: a wide hospital surveillance method so that a lot of data is missed
5. The IPCN development program is very rare, related to financing
6. Audit and surveillance are still manually done, so there is a risk of missing data and late entry

Discussion

Implementation of functions and roles of IPCN that are not optimal can risk the ineffectiveness of infection prevention and control in hospitals. Previous studies have shown a correlation between the effectiveness of the IPC program for success in controlling MRSA (3). While other studies say that good cooperation is needed between IPCN and health workers in efforts to prevent and control infection, both in conducting

assessments, interventions, and evaluating the success of the IPC program (4). This shows the importance of cooperation between IPCN and the unit in order to be able to prevent and control infections in hospitals.

IPCN is required to be able to prevent and control infections in hospitals through various functions and roles assigned. The duties of the IPCN include implementing various studies, planning, implementation, monitoring and evaluation, and guidance in units (15). While the daily activities that must be carried out include: daily visits and supervision to the area of responsibility; carry out surveillance, germ patterns, needle stick punctures; provide motivation and reprimand about implementing the IPC compliance; providing information for non-health officers, visitors and families about IPC; follow a management round, committee for controlling antibiotic resistance round, and difficult case rounds every week according to the work area; conduct daily audits (according to the annual program); monitor the implementation of the PPI, implementation of the SPO, isolation awareness; monitor environmental health, control rational use of antibiotics; and health staff health monitoring to prevent transmission of infection from health workers to patients and vice versa (16). The implementation of this task is not fully able to be carried out because the various activities of the unit that must be followed by IPCN cause the implementation of the IPCN functions and roles to not be carried out properly.

The hospital accreditation commission stipulates the need for an IPCN link to help IPCN carry out its roles and functions. IPCN links are nurses from each unit, especially those at risk of infection (17). The IPCN link has the duty to collect data on the compliance of officers in applying standard precautions and isolation, data collection of HAIs, as well as providing motivation, reprimand, and counseling to officers, visitors, and patients to prevent infection (16). Previous studies have suggested that the IPCN link program has a positive impact on reducing the incidence of MRSA, the incidence of MRSA bacteremia, and increasing compliance with hand hygiene in units (18). in order to be able to carry out the above-mentioned tasks, IPCN links need to be equipped with various skills, one of which is psychological skills so that they are able to deal with various problems in carrying out their tasks and carry out psychological approaches (15,19).

This case study found that IPCN links were not able to carry out their duties to the maximum because they still had to act as nurse nurses in their respective units. This policy is carried out related to the fulfillment of competency requirements as nurses who care for patients. This refers to the government regulation that nurses who work in hospitals must have practice licenses and registration letters that must be updated every 5 years (20). Fakih (9) states, the first strategy that can be carried out by the unit in efforts to prevent and control infection is by evaluating the infection prevention policies and practices. While the results of the evaluation of a number of IPCN links were found that if given support, the IPCN link would be able to do its job well (21). Jakarta X Hospital needs to review the policies related to the fulfillment of IPCN link competencies as nurses in the room, so that they can be more maximal in carrying out their duties as an extension of IPCN in conducting infection prevention and control in the care unit.

IPCN has not been well regarded by the unit, this is due to various factors. Some of these factors include: the existence of stigma against IPCN namely as "germ police" and evaluators; Younger age is considered not to have sufficient work experience so it is not considered a figurehead or role model in IPC. This happened because IPCN's visit to the area of responsibility was more focused on conducting surveillance and auditing. In a study conducted to determine the experience of nursing students and nursing mentors towards IPCN, it was found that the presence of IPCN was always viewed negatively by

nurses because it tended to evaluate and blame (22). One effort that can be done to increase the success of the implementation of IPC is to focus on target areas that are highly at risk of HAIs while other areas are maximized through the role of the IPCN link (23).

The function and role of the IPCN have evolved over time as a result of the growing need for infection prevention and control. The development of infectious diseases, an increase in the population of susceptible elderly people, the need for environmental management in reducing cross-infection, and the problem of antibiotic resistance are some of the things that underlie the need to develop science in the prevention and control of infections (24). Some countries have developed IPCN to become infection prevention specialist nurses, such as the United Kingdom, Ireland, Japan, and Korea by considering the need for competency specialists in infection prevention and control (25–27). This can be the basis for X Jakarta hospitals in optimizing the functions and roles of IPCN, namely increasing IPCN knowledge and skills. Optimizing the functions and roles of IPCN can be done by increasing IPCN knowledge and skills.

The Association of Professionals in Infection Control and Epidemiology (APIC), the IPC organization in Canada developed the concept of IPC by introducing personal professional concept models, supporting professional career growth, and educational development (28,29) and certifying beginner IPCN. The next development of the IPCN career is done by evaluating the level of competence (self-assessment) to determine the level of competence as proficient or expert. Another effort by APIC to improve IPCN knowledge and skills is to establish 8 components of the role of IPC practitioners, namely: identification of infectious disease processes, surveillance and epidemiological investigations, preventing/controlling transmission of infectious agents/health-related infections (HAIs); occupational health/employees; management and communication; education and research; care environment; and cleanliness, sterilization, disinfection and asepsis (13).

Determining the level of competency and the role of IPCN carried out by APIC can help IPCN increasingly focus on implementing infection prevention and control in hospitals. Owned competencies can increase IPCN's self-confidence and generate respect from the unit because they have more specificity and knowledge. IPCN no longer focuses on conducting compliance audits but focuses on helping units to implement and overcome problems related to the prevention and treatment of infections in hospitals.

Conclusion

IPCN is an individual in charge of implementing infection prevention and control in hospitals (17). IPCN at Jakarta X Hospital has not been optimal in carrying out its functions and roles. In carrying out its functions and roles, IPCN has not fully received support from the unit, and IPCN's current performance is inadequate according to the unit because IPCN tends to conduct audits when making visits to their respective areas of responsibility. One of the policies of the hospital infection control committee, namely hospital-wide surveillance resulted in IPCN not being able to focus on handling infections specifically.

It is recommended that hospitals develop IPCN competencies as a basis for evaluating IPCN and improving existing skills and can focus on IPCN's duties and responsibilities on handling infections. IPCN competencies are expected to be able to improve IPCN performance and make the unit not look down on IPCN, but consider it as

a partner in preventing and controlling infections, and being able to provide solutions and deal with appropriate problems for each patient.

Acknowledgment

I thank my lecturer (Dr. Rr. Tutik Sri Hariyati, S.Kp., MARS) who give advice and criticism to perfect the manuscript. I thank all the IPCN in Jakarta's "X" hospital who allow me to study about these IPCN activities for a month in the IPC Committee.

References

1. Departemen Kesehatan Republik Indonesia. Pedoman Pencegahan dan Pengendalian Infeksi Di Rumah Sakit Dan Fasilitas Pelayanan Kesehatan Lainnya. Perhimpunan Pengendalian Infeksi Indonesia; Departemen Kesehatan Republik Indonesia. 2008.
2. Joint Commission International. Joint Commission International Accreditation Standards for. 6th edition. USA: Departement of Publication Joint Commission Resources. 2017.
3. Saito N, Itoga M, Kimura M, Inoue F, Minakawa S, Kimura T, et al. Evaluating the effectiveness of infection control efforts in hospitals using information in microbiological laboratory databases. *J Gen Fam Med* [Internet]. 2017;18(6):354–9.
4. Aureden K. Overview of Key Infection Prevention Issues and Advances. *AORN J*. 2015;102(6):575–6.
5. Rabaan AA, Alhani HM, Bazzi AM, Al-Ahmed SH. Questionnaire-based analysis of infection prevention and control in healthcare facilities in Saudi Arabia in regards to Middle East Respiratory Syndrome. *J Infect Public Health*. 2017;10(5):548–63.
6. Yoon YK, Lee SE, Seo BS, Kim HJ, Kim JH, Yang KS, et al. Current status of personnel and infrastructure resources for infection prevention and control programs in the Republic of Korea: A national survey. *Am J Infect Control* [Internet]. 2016;44(11):e189–93.
7. Mackenzie FM, Bruce J, Struelens MJ, Goossens H, Mollison J, Gould IM. Antimicrobial drug use and infection control practices associated with the prevalence of methicillin-resistant *Staphylococcus aureus* in European hospitals. *Clin Microbiol Infect* [Internet]. 2007;13(3):269–76.
8. Brewster L, Tarrant C, Dixon-Woods M. Qualitative study of views and experiences of performance management for healthcare-associated infections. *J Hosp Infect*. 2016;94(1):41–7.
9. Fakih MG, Heavens M, Ratcliffe CJ, Hendrich A. First step to reducing infection risk as a system: Evaluation of infection prevention processes for 71 hospitals. *Am J Infect Control*. 2013;41(11):950–4.
10. Salama MF, Jamal WY, Mousa H Al, Al-AbdulGhani KA, Rotimi VO. The effect of hand hygiene compliance on hospital-acquired infections in an ICU setting in a Kuwaiti teaching hospital. *J Infect Public Health*. 2013;6(1):27–34.
11. Lai CC, Lee CM, Chiang HT, Hung CT, Chen YC, Su LH, et al. Implementation of a national bundle care program to reduce catheter-associated urinary tract infection in high-risk units of hospitals in Taiwan. *J Microbiol Immunol Infect* [Internet]. 2017;50(4):464–70.
12. Dewi F. Determinan perilaku perawat dalam memutus rantai infeksi berdasarkan peran

- kepemimpinan dan fungsi manajemen kepala ruang di RSUD Cut Meutia Aceh Utara. 2013.
13. Kalp EL, Marx JF, Davis J. Understanding the current state of infection preventionists through competency, role, and activity self-assessment. *Am J Infect Control*. 2017;45(6):589–96.
 14. Choi JS, Kim KM. Factors influencing the self-perceived practice levels of professional standard competency among infection control nurses in Korea. *Am J Infect Control*. 2014;42(9):980–4.
 15. PMK RI. Peraturan Menteri Kesehatan Republik Indonesia Nomor 27 Tahun 2017 Tentang Pedoman Pencegahan dan Pengendalian Infeksi di Fasilitas Pelayanan Kesehatan. 2017.
 16. Komite Pencegahan dan Pengendalian Infeksi Rumah Sakit. Pedoman Manajerial Pencegahan dan Pengendalian Infeksi Rumah Sakit di RSUPN Dr. Cipto Mangunkusumo. edisi 5. 2015
 17. Komisi Akreditasi Rumah Sakit. Standar Nasional Akreditasi Rumah Sakit Edisi 1. 2018.
 18. Sopirala MM, Yahle-Dunbar L, Smyer J, Wellington L, Dickman J, Zikri N, et al. Infection control link nurse program: An interdisciplinary approach in targeting healthcare-acquired infection. *Am J Infect Control*. 2014;42(4):353–9.
 19. Peter D, Meng M, Kugler C, Mattner F. Strategies to promote infection prevention and control in acute care hospitals with the help of infection control link nurses: A systematic literature review. *Am J Infect Control*. 2018;46(2):207–16.
 20. UU Keperawatan. Undang Undang Republik Indonesia Nomor 38 Tahun 2014 Tentang Keperawatan. 2014.
 21. Lynne, Williams; Beryl, Cooledge; Jacqueline, Huws; Heledd, Owen Griffiths; Jane W. An evaluation of an Infection Prevention Link Nurse Programme in Community Hospitals and development of an implementation model An evaluation of an Infection Prevention Link Nurse Programme in Community Hospitals and development of an implementation model. 2018;
 22. Ward DJ. Attitudes towards the Infection Prevention and Control Nurse: An interview study. *J Nurs Manag*. 2012;20(5):648–58.
 23. Hale R, Powell T, Drey NS, Gould DJ. Working practices and success of infection prevention and control teams: A scoping study. *J Hosp Infect*. 2015;89(2):77–81.
 24. Weston D. Infection prevention and control : theory and clinical practice for healthcare professionals. England: John Wiley & Sons Ltd; 2008.
 25. Smales C, Varia H. Developing the role of the infectious diseases clinical nurse specialist. 2004;5(2):19–22.
 26. Mcnamara MS, Fealy GM, Geraghty R. Cultures of Control: A Historical Analysis of the Development of Infection Control Nursing in Ireland. *Nurs Hist Rev*. 2013;21(1):55–75.
 27. Kim KM, Jeong JS, Park HR. Infection control nurse specialist education in Korea. *Am J Infect Control*. 2010;38(5):413–5.
 28. Gase KA, Leone C, Khoury R, Babcock HM. Advancing the competency of infection preventionists. *Am J Infect Control*. 2015;43(4):370–9.
 29. Bubb TN, Billings C, Berriel-Cass D, Bridges W, Caffery L, Cox J, et al. APIC professional and practice standards. *Am J Infect Control*. 2016;44(7):745–9.

