MINH
MALAHAYATI INTERNATIONAL JOURNAL OF NURSING AND HEALTH SCIENCE
ISSN 2620-9152 (Print)
ISSN 2621-4083 (Online)
DOI: 10.33024
Nomor: 79/E/KPT/2023

ARTICLE INFORMATION
Received: February, 24, 2025
Revised: July, 30, 2025
Available online: July, 31, 2025
at : https://e-jurnal.iphorr.com/index.php/minh

Emerging concern of supportive supervision in hospital waste management: A formative delphi study

Markus Kaban[1]*, Suhartono[1], Purwanto Adhi Pireno[1], Alberta Widya Kristanti[2], Perigrinus Hermin Sebong[2]

[1]Universitas Diponegoro
[2]Universitas Katolik Soegijapranata
Corresponding author: *E-mail: markuskaban70@gmail.com

Abstract

Background: Improper management of all types of hospital waste has become a significant problem relevant to public health issues. However, even though there are regulations regarding waste management, the implementation still varies between hospitals. The most neglected factor is the waste management supervision frameworks.
Purpose: To identify the emerging concern of supportive supervision in hospital waste management.
Method: This formative delphi study employed qualitative methods and focus group discussions (FGDs). Each FGD lasted 60 minutes. The study incorporated the concept of stakeholder engagement in hospital waste governance, focusing on factors driving stakeholder participation, knowledge-sharing structures, information exchange, decision-making processes, and the institutionalization of various centers of power and decision-making to diversify waste management oversight.
Results: Participants were most likely to decide to improve waste management. Of the 18 questions, three received a higher number of "yes" responses (53.8%). The first question concerned managers in the environmental, occupational safety, and health department providing recognition/appreciation for staff performance or achievements in waste management at the hospital. The second question concerned information provided by managers to staff regarding open and periodic performance appraisals. The third question concerned the use of audit results to improve the existing waste management system.
Conclusion: Supervision is an activity aimed at improving service quality. It requires a conditional and open environment to accept problem-solving. To enhance the quality of service, supervision must be systematic and require continuous follow-up.

Keywords: Emerging Concer; Hospital Waste Management; Supportive Supervision.

INTRODUCTION

Indonesia, as a developing country, is striving to improve hospital waste management standards. In 2021, 73% of healthcare facilities, such as hospitals, still needed to meet waste management standards (Ministry of Health of the Republic of Indonesia, 2021). Hospital waste in Indonesia is increasing by 30% per day, reaching 382 tons. Medical waste is also increasing by 15-16% per day (Cordova, Nurhati, Riani, & Iswari, 2021). Previous studies have found that improper medical waste management in hospitals can lead to sharps injuries, environmental contamination by hazardous chemicals, and diseases transmitted by infectious agents (Ghanimeh, Gómez-Sanabria, Tsydenova, Štrbová, Iossifidou, & Kumar, 2019).

DOI: https://doi.org/10.33024/minh.v8i5.752

Improper waste management practices are a concern in developing countries due to inadequate resources for waste management, and waste management is often delegated to under-educated and under-trained workers who work without proper guidance or adequate protection (Diaz, Savage, & Eggerth, 2005; Soares, Finotti, da Silva, & Alvarenga, 2013). Improper management of all types of hospital waste has become a significant problem relevant to society. Hospital waste managers are under pressure to develop sustainable approaches to hospital waste management and integrate strategies to achieve a sustainable society. Hospital waste management is a highly complex task. It constantly navigates waste dynamics and uncertainties (Ali, Wang, Chaudhry, & Geng, 2017). Although regulations regarding waste management exist, their implementation varies across hospitals (Adogu, Ubajaka, Nebuwa, 2014; Diouf, Badiane, Manga, Idohou-Dossou, Sow, & Wade, 2015).

The most neglected factor is the waste management supervision system. In general, hospital managers often apply a hierarchical approach to overseeing waste management without accommodating feedback or input from their staff (Alharbi, Alhaji, & Qattan, 2021). Supervision mechanisms need to be more supportive and demotivating due to the need for more supervisory skills among hospital managers. Consequently, under these conditions, staff will feel uncomfortable performing routine tasks without understanding the reasons, routine reports become habitual rather than actual conditions, and they lack a sense of ownership in their workspace (World Health Organization, 2020).

RESEARCH METHOD

This study incorporates the concept of stakeholder involvement in waste governance in hospitals, focusing on what drives stakeholder participation, knowledge-sharing structures, information exchange, decision-making processes, and the institutionalization of multiple centers of power and decision-making to diversify waste management supervision. Stakeholder participation acquires ever-expanding content because participation involves processes and structures in which stakeholders are engaged in agenda-setting, decision-making, and policy development through the exchange of information.

This formative Delphi study used qualitative methods and focus group discussions. The focus group discussions lasted 60 minutes. The focus group discussions focused on how the hospital is committed and accountable to waste management issues and how the organization engages in collective decision-making, investigations, and human resource mobilization tasks. Participants were organized separately for the group discussions for the following reasons. First, participants are responsible for and make important decisions regarding the institutional framework and collaborative tasks with other actors. Second, participants coordinate the actions of various stakeholders to oversee waste management. Furthermore, participants are actively involved in improving the quality of hospital waste management. Therefore, participants need to have knowledge and experience related to hospital waste management, how participants initiate waste management, comply with existing regulations, and be willing to work to coordinate resources and activities. This study was conducted at Dr. Suhardi Hardjolukito Hospital in Yogyakarta City.

Idea aggregation is done through qualitative data collection through focus group discussions to generate and combine various ideas and solutions to a problem. Expert opinion gathering was conducted through quantitative data collection (survey) to identify and present the views of a group of experts on hospital waste management. Sample inclusion criteria included considering power: how much power and influence participants have based on their position; awareness, how much participants are aware of the impact of waste management; interest, how high the participants' importance is to the results of waste management; and support, which is supporting or opposing the intervention. Participants included waste officers, laboratories, the Central Sterile Supplies Department (CSSD), third parties, and management leaders. Leaders: head of the environmental health division and congratulations on the commemoration of national occupational safety and health day. staff: unit heads and field coordinators. Employees: work implementers. Third parties: officers who collect work waste.

Markus Kaban[1]*, Suhartono[1], Purwanto Adhi Pireno[1], Alberta Widya Kristanti[2], Perigrinus Hermin Sebong[2]

[1]Universitas Diponegoro
[2]Universitas Katolik Soegijapranata
Corresponding author: *E-mail: markuskaban70@gmail.com

DOI: https://doi.org/10.33024/minh.v8i5.752

The first round of Focus Group Discussions (FGDs) involved 13 participants involved in hospital waste management. The environmental health and occupational safety unit comprised leaders, management, staff, and employees. The FGDs were held on September 13, 2023, and addressed issues related to hospital waste management. This was followed by a second round survey, which conducted a visibility survey on the development of supportive supervision by developing 14 questions to reflect the actual progress of supportive supervision. This survey aimed to improve hospital waste management. The surveys were conducted from March to April 2024. The results provided recommendations and feedback for developing an agreement on supportive supervision-based hospital waste management.

The focus group discussions were audio-recorded, transcribed, and translated into English. The next step was to integrate the transcripts with written notes taken during the discussions. Each translated transcript was carefully read several times, manually coded, and summarized into predetermined themes: "waste management," "waste management audit process," and "supporting and inhibiting factors." The data were then analyzed using content analysis techniques. Narratives are presented based on each theme and illustrated with verbatim quotations.

RESEARCH RESULTS

Table 1. Distribution of Participant Characteristics (N=13)

Variabel	Results
Age (Mean±SD)(Range)(Years)	(36.6±9.68)(25-45)
Gender (n/%)	
Male	10/77.0
Female	3/23.0
Education (n/%)	
High School	5/38.5
Diploma III	5/38.5
Diploma IV	1/7.7
Bachelor's Degree	2/15.3
Units (n/%)	
Central Sterile Supplies Department	5/38.5
Environmental Health and Occupational Safety	6/46.2
Department Laboratory	2/15.3
Work Duration (n/%)	
≤10 years	9/69.2
>10 years	4/30.8

Table 1 presents the characteristics of the participants, with a mean age of 36.3 years and a standard deviation of 9.68. The majority of participants were male, namely 10 participants (77.0%), had a high school education and Diploma III, each with 5 participants (38.5%), worked in the Environmental Health and Occupational Safety unit, as many as 6 participants (46.2%), and had a work period of ≤10 years, as many as 9 participants (69.2%).

Markus Kaban[1]*, Suhartono[1], Purwanto Adhi Pireno[1], Alberta Widya Kristanti[2], Perigrinus Hermin Sebong[2]

[1]Universitas Diponegoro
[2]Universitas Katolik Soegijapranata
Corresponding author: *E-mail: markuskaban70@gmail.com

DOI: https://doi.org/10.33024/minh.v8i5.752

Table 2. Participants Respond Regarding the Need to Develop a Supportive Supervision Model

Items	Respons	
	Strongly Agree (n/%)	Agree (n/%)
Do you think during your time working in the environmental health and occupational safety section, was there a standard operating procedure regarding supervision (mentoring/supervision) of waste processing?	10/76.9	3/23.1
Do you think your manager provides adequate supervision to you and team to control the quality of waste management?	7/53.8	6/46.2
Do you think your manager helps you and your team learn to correct mistakes in waste management for a better future?	11/84.6	2/15.4
Do you think your manager routinely communicates specific needs to improve the quality of waste management for you and your team?	8/61.5	5/38.5
Do you think your manager facilitates feedback from you and your team on hospital waste management?	8/61.5	5/38.5
Do you think your manager giving appreciation for the performance or achievements made by you and your team regarding waste management in the hospital?	6/46.2	7/53.8
Do you think your manager provides communication or opportunities for you to be involved in waste management planning?	7/53.8	6/46.2
Do you think your manager respects your freedom to express opinions or provide assessments/suggestions for improving waste management?	7/53.8	6/46.2
Do you think your manager pays attention to the need for personnel upgrades/training in handling waste management?	9/69.2	4/30.8
Do you think your manager has a work plan/program for managing hospital waste that is well-socialized to you and your team?	7/53.8	6/46.2
Do you think your manager always provides orientation or conducts training when new staff or officers join the environmental health, occupational, and safety department?	10/76.9	3/23.1
Do you think your manager or workplace in the hospital regularly informs staff about performance appraisals openly to you and your team?	6/46.2	7/53.8

Markus Kaban[1]*, Suhartono[1], Purwanto Adhi Pireno[1], Alberta Widya Kristanti[2], Perigrinus Hermin Sebong[2]

[1]Universitas Diponegoro
[2]Universitas Katolik Soegijapranata
Corresponding author: *E-mail: markuskaban70@gmail.com

DOI: https://doi.org/10.33024/minh.v8i5.752

Items	Respons	
	Strongly Agree (n/%)	Agree (n/%)
Do you think there are regular audits available regarding waste management in hospitals?	7/53.8	6/46.2
Do you think the audit results help improve the existing waste management system?	6/46.2	7/53.8
Do you think the waste assessment/reporting model with third parties (external parties) follows the existing reality?	8/61.5	5/38.5
Do you think the hospital workplace develops a supportive supervision model (involving superiors and subordinates in decision/policy making) to ensure better quality waste management?	9/69.2	4/30.8
Do you think your current welfare aligns with your performance in managing hospital waste?	8/61.5	5/38.5
Do you think the waste management criteria by the quality indicators required in hospital accreditation?	8/61.5	5/38.5

Table 2 presents participant responses, with the average response being strongly agree and agree. Of all responses, participants were most likely to decide to improve waste management. Of the 18 questions, three received a higher number of yes responses (53.8%). The first concerns the provision of rewards/appreciation by managers in the environmental health, occupational safety, and health department for staff performance or achievements in waste management at the hospital. The second concerns the information provided by managers to staff regarding open and periodic performance appraisals. The third concerns the use of audit results to improve the existing waste management system. These findings indicate the need to develop or update systems for managing hospital waste in terms of planning, implementation, evaluation, reporting, financing, and monitoring.

Implementation of Hospital Waste Management

In general, the hospital staff was aware of the implementation of waste management. They already stated that all waste management was covered by national and local regulations. These guidelines categorized hospital waste into solid and liquid according to the type of hospital.

"*There are two types of hospital waste: infectious waste (consisting of liquid and solid waste) and domestic waste. Liquid waste is used for monthly inspections in collaboration with a third party, while solid waste is used in collaboration with a third party, and domestic waste is handled by the Bantul Environmental Agency.*" (P1)

"The waste management regulations used at the national level were Minister of Health Regulation Number 7 of 2019 and Minister of Health Regulation Number 2 of 2023. While the local regulations that were applied were Regulation of the Governor of the Special Region of Yogyakarta Province Number 7 of 2016." (P2)

Implementation Guidance and Ongoing Supervision

Most stakeholders, especially daily implementor divisions, felt there was a lack of clear guidance regarding specific guidelines. They stated that national policies were not communicated adequately

Markus Kaban[1]*, Suhartono[1], Purwanto Adhi Pireno[1], Alberta Widya Kristanti[2], Perigrinus Hermin Sebong[2]

[1]Universitas Diponegoro
[2]Universitas Katolik Soegijapranata
Corresponding author: *E-mail: markuskaban70@gmail.com

DOI: https://doi.org/10.33024/minh.v8i5.752

to key players at the hospital level. Staff representatives stated that sometimes, during the implementation of the guide, it did not pay attention to the priorities and needs of key actors in operational units, resulting in a lack of communication regarding responsibilities. Management must be transparent in ongoing communication and collaboration with staff to supervise waste management.

"One of the final problems discovered during the inspection was environmental documents that were no longer appropriate to current conditions. Because the last document presented was in 2012." (P3)

Most stakeholders agree that there is a gap between the national and regional levels, often caused by a lack of ongoing supervision and communication guidance. Due to a lack of effective communication, there appears to be a mismatch between national policy objectives and the achievement of proposed objectives regarding the local context.

"In addition to inspections from the provincial government and the Bantul Environment and Forestry Agency, there are also inspections from the Indonesian National Armed Forces itself, including the Inspector General of the Air Force, the Inspector General of the Indonesian National Armed Forces, and the Inspector General of the Ministry of Defense. Frequently asked questions during Inspector General inspections include environmental quality standards and permits." (P4)

Proposed interventions to improve hospital waste management

Two main categories emerged from the focus group discussions: proposed supervisory interventions and organizational culture changes. For supervisory interventions, most participants considered increasing staff and managers' awareness of appropriate supervisory methods as a prerequisite for improving waste management quality. In this context, the influence of supportive supervision, work instructions, and various reminder tools was discussed. Methods deemed relevant, practical, and feasible included leveraging equal participation between managers and staff in the supervisory system.

"The Public Health and Occupational Safety and Health Unit needs to be formed with a division of tasks and responsibilities in each section, such as those responsible for liquid waste, those responsible for solid waste, those responsible for clean water and the water treatment plant, those responsible for occupational safety and health, those responsible for physical health and indoor air." (P5)

Participants stated that a lack of facilities was a major obstacle to translating their willingness to comply with the guidelines into practical practice. They also noted that developing an appropriate supervision model was crucial for changing organizational culture.

"Facilities and infrastructure, including the discharge meter, need to be repaired/updated. Regeneration and rejuvenation of the wastewater treatment plant are necessary because the area in front of the wastewater treatment plant is old and has not been rejuvenated since 2006." (P6)

DISCUSSION

Supervision is a process used to support and ensure plans are on track and develop the knowledge and skills of individuals or groups. Supervision can provide information and improvements in health services, programs, or projects that are an essential part of the health sector (Mahendradhata, Probandari, Wilastonegoro, & Sebong, 2022). The basic principle of supervision is providing motivation and learning experiences to staff to increase their knowledge and competence as desired in their work (Kilroy, 2006). Supervision is necessary to improve the quality of health services, compliance with guidelines or standard operational procedures, and consideration of job satisfaction (Probandari, 2015; Deussom, Mwarey, Bayu, Abdullah, & Marcus, 2022).

The implementation of supervision needs attention to its effectiveness to achieve the results or feedback expected by the organization. Most supervision models still apply the traditional supervision model, namely hierarchical. This model

Markus Kaban[1]*, Suhartono[1], Purwanto Adhi Pireno[1], Alberta Widya Kristanti[2], Perigrinus Hermin Sebong[2]

[1]Universitas Diponegoro
[2]Universitas Katolik Soegijapranata
Corresponding author: *E-mail: markuskaban70@gmail.com

DOI: https://doi.org/10.33024/minh.v8i5.752

applies control or inspection, which positions staff as unmotivated and needs control from outside parties. Transparency, reciprocal communication between supervisors and staff, and problem-solving using a team approach are not found in this traditional model (World Health Organization, 2020).

In this case, supervision is one of the strategies used to improve the quality of waste management in hospitals. With a supervision system, it is hoped that a planned management system will be realized, according to standards, meeting quality standards and producing sustainable management that is not just routine (Chisholm, Zamani, Negm, Said, Abdel daiem, Dibaj, & Akrami, 2021). Supervision, In the health sector is interpreted as improving quality at all levels of the health system through strengthening relationships within the health system, especially in identifying and providing solutions, helping to improve resource allocation, improving work standards, working teams, and generating two-way communication. Supervision focuses on supervising and supporting health workers in improving patient service performance. Apart from that, supervision also aims to ensure staff work according to established standards, identify gaps in health services, monitor the effects and obstacles faced in the work system, and ensure all work is carried out well so that all service processes run smoothly (Snowdon, Leggat, & Taylor, 2017; Tomlinson, 2015).

The differentiation of supervision implementation from others is the presence of steps such as gathering information, problem-solving and feedback, on-the-job training, and reporting supervision results (World Health Organization, 2020). In this study, we collected information from FGDs and a survey. From FGDs, we learned that the national policies were not communicated adequately to key players at the hospital level. It did not pay attention to the priorities and needs of key actors in operational units, resulting in a lack of communication regarding responsibilities. Management must be transparent in ongoing communication and collaboration with staff to supervise waste management. Due to a lack of effective communication, there appears to be a mismatch between national policy objectives and the achievement of proposed objectives regarding the local context.

Two main categories emerge from the FGDs: the proposed supervision interventions and organizational culture change. For supervision interventions, most participants considered enhancing awareness among the staff and managers about appropriate supervision methods as a prerequisite for waste management quality improvement. There are still areas for improvement regarding transparency in communication and collaboration with staff in the supervision of hospital waste management. Besides that, there needed to be more facilities for translating their willingness to comply with guidelines into actual practice. Participants also stated that formulating a proper supervision model was essential for organizational culture change. Secondly, in the survey we collected from managers and staff, there is the importance of giving awards/appreciation to managers at the environmental health, occupational, and safety department for the staff performance or achievements in waste management at the hospital; the second concerns information provided by the manager to staff regarding open and periodic performance appraisals; the third concerns the use of audit results to improve the existing waste management system. So, there is a need to develop or update the system for managing hospital waste in terms of planning, implementation, evaluation, reporting, financing, and supervision.

After obtaining these results, the next step is to address issues and provide feedback. Staff can assess the interim results of their work and identify ways to address any gaps. Positive feedback, suggestions, and problem-focused feedback are all beneficial (Probandari, 2015; Hardavella, Aamli-Gaagnat, Saad, Rousalova, & Sreter, 2017; Mandhane, Ansari, Shaikh, & Deolekar, 2015). Afterward, on-the-job training will be conducted to review best practices in staff learning materials. A report will then be prepared that covers all activities and describes any interim corrective actions taken during supervision (World Health Organization, 2020).

Markus Kaban[1]*, Suhartono[1], Purwanto Adhi Pireno[1], Alberta Widya Kristanti[2], Perigrinus Hermin Sebong[2]

[1]Universitas Diponegoro
[2]Universitas Katolik Soegijapranata
Corresponding author: *E-mail: markuskaban70@gmail.com

DOI: https://doi.org/10.33024/minh.v8i5.752

CONCLUSION

Supervision is an activity aimed at improving service quality. It requires a conditional and open environment to accept problem-solving. To enhance the quality of service, supervision must be systematic and require continuous follow-up. In addition, the competence of supervisors or leaders is an essential aspect of carrying out staff supervision well and with quality. There is a need to develop or update the system for managing hospital waste in terms of planning, implementation, evaluation, reporting, financing, and supervision.

REFERENCE

Adogu, P. O. U., Ubajaka, C. F., Nebuwa, J. E. (2014). Knowledge and practice of medical waste management among health workers in a Nigerian general hospital. *Asian Journal of Science and Technology,5* (12), 833–838.

Alharbi, N. S., Alhaji, J. H., & Qattan, M. Y. (2021). Toward sustainable environmental management of healthcare waste: A holistic perspective. *Sustainability*, *13*(9), 5280.

Ali, M., Wang, W., Chaudhry, N., & Geng, Y. (2017). Hospital waste management in developing countries: A mini review. *Waste Management & Research*, *35*(6), 581-592.

Chisholm, J. M., Zamani, R., Negm, A. M., Said, N., Abdel daiem, M. M., Dibaj, M., & Akrami, M. (2021). Sustainable waste management of medical waste in African developing countries: A narrative review. *Waste management & research*, *39*(9), 1149-1163.

Cordova, M. R., Nurhati, I. S., Riani, E., & Iswari, M. Y. (2021). Unprecedented plastic-made personal protective equipment (PPE) debris in river outlets into Jakarta Bay during COVID-19 pandemic. *Chemosphere*, *268*, 129360.

Deussom, R., Mwarey, D., Bayu, M., Abdullah, S. S., & Marcus, R. (2022). Systematic review of performance-enhancing health worker supervision approaches in low-and middle-income countries. *Human resources for health*, *20*(1), 2.

Diaz, L. F., Savage, G. M., & Eggerth, L. L. (2005). Alternatives for the treatment and disposal of healthcare wastes in developing countries. *Waste management*, *25*(6), 626-637.

Diouf, A., Badiane, A., Manga, N. M., Idohou-Dossou, N., Sow, P. S., & Wade, S. (2015). Daily consumption of ready-to-use peanut-based therapeutic food increased fat free mass, improved anemic status but has no impact on the zinc status of people living with HIV/AIDS: a randomized controlled trial. *BMC public health*, *16*(1), 1.

Ghanimeh, S., Gómez-Sanabria, A., Tsydenova, N., Štrbová, K., Iossifidou, M., & Kumar, A. (2019). Two-level comparison of waste management systems in low-, middle-, and high-income cities. *Environmental Engineering Science*, *36*(10), 1281-1295.

Hardavella, G., Aamli-Gaagnat, A., Saad, N., Rousalova, I., & Sreter, K. B. (2017). How to give and receive feedback effectively. *Breathe*, *13*(4), 327-333.

Kilroy, D. A. (2006). Clinical supervision in the emergency department: a critical incident study. *Emergency Medicine Journal*, *23*(2), 105-108.

Mahendradhata, Y., Probandari, A. N., Wilastonegoro, N. N., & Sebong, P. (2022). *Manajemen Program Kesehatan*. Yogyakarta: UGM Press.

Markus Kaban[1]*, Suhartono[1], Purwanto Adhi Pireno[1], Alberta Widya Kristanti[2], Perigrinus Hermin Sebong[2]

[1]Universitas Diponegoro
[2]Universitas Katolik Soegijapranata
Corresponding author: *E-mail: markuskaban70@gmail.com

DOI: https://doi.org/10.33024/minh.v8i5.752

Mandhane, N., Ansari, S., Shaikh, T. P., & Deolekar, S. (2015). Positive feedback: a tool for quality education in field of medicine. *International Journal of Research in Medical Sciences*, *3*(8), 1868-1873.

Ministry of Environment and Forestry of Republic Indonesia. (2016). Peraturan Kementerian Lingkungan Hidup dan Kehutanan Republik Indonesia No. P. 68/MENLHK-Setjen/2016, tentang Baku Mutu Air Limbah Domestik. Retrieved from: Jhttps://ppkl.menlhk.go.id/website/filebox/5/170314114854P.68%20BAKU%20MUTU%20LIMBAH%20DOMESTIK.pdf

Ministry of Health of the Republic of Indonesia. (2021). Profil Kesehatan Indonesia. Retrieved from: https://kemkes.go.id/id/profil-kesehatan-indonesia-2021

Probandari, A. (2015). *Supervisi. Bahan Ajar*. Yogyakarta: Ilmu Kesehatan Masyarakat, Fakultas Kedokteran, Universitas Gadjah Mada.

Snowdon, D. A., Leggat, S. G., & Taylor, N. F. (2017). Does clinical supervision of healthcare professionals improve effectiveness of care and patient experience? A systematic review. *BMC health services research*, *17*(1), 786.

Soares, S. R., Finotti, A. R., da Silva, V. P., & Alvarenga, R. A. (2013). Applications of life cycle assessment and cost analysis in health care waste management. *Waste management*, *33*(1), 175-183.

Tomlinson, J. (2015). Using clinical supervision to improve the quality and safety of patient care: a response to Berwick and Francis. *BMC medical education*, *15*(1), 103.

World Health Organization. (2020). Training for mid-level managers (MLM): module 4: supportive supervision. Retrieved from: https://iris.who.int/handle/10665/337056

Markus Kaban[1]*, Suhartono[1], Purwanto Adhi Pireno[1], Alberta Widya Kristanti[2], Perigrinus Hermin Sebong[2]

[1]Universitas Diponegoro
[2]Universitas Katolik Soegijapranata
Corresponding author: *E-mail: markuskaban70@gmail.com

DOI: https://doi.org/10.33024/minh.v8i5.752