

Implementation of Management Functions in The Management of Medical and Non-Medical Waste in Hospitals: A Study on Harapan Sehat Bumiayu Hospital

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ABSTRACT

Hospitals are healthcare institutions that produce significant amounts of medical and non-medical waste daily. Waste management that does not meet standards has the potential to negatively impact human health, the safety of healthcare workers, and environmental degradation. This study aims to analyze the implementation of management functions including planning, organizing, implementing, and supervising (POAC) in medical and non-medical waste management at Harapan Sehat Bumiayu Hospital, and to identify obstacles that hinder its implementation. The study used a qualitative approach with a descriptive case study design. Data were collected through field observations, semi-structured interviews with seven key informants, and documentation, then analyzed using an interactive analysis model that includes data reduction, data presentation, and conclusion drawing. The results show that the four management functions have been implemented through provision of facilities and scheduling of waste collection (planning), clear division of tasks among staff (organizing), routine implementation of waste collection and transportation accompanied by the use of PPE (implementation), and daily monitoring and periodic institutional audits (supervision). However, several obstacles remain, including indiscipline among some staff in waste sorting and limited supporting facilities in some service units. Effective waste management contributes positively to hospital environmental cleanliness, infection prevention, and improved occupational safety for healthcare workers.

Keywords: management functions; medical waste; non-medical waste; hospital; waste segregation.

INTRODUCTION

Hospitals are health service institutions that play a central role in improving public health through promotive, preventive, curative, and rehabilitative services. In carrying out these health service activities, hospitals generate substantial quantities of medical and non-medical waste that require appropriate and integrated management. According to the World Health Organization, healthcare facilities worldwide generate approximately 16 billion injections annually, and improper disposal of associated waste including sharps, infectious materials, and pharmaceutical residues contributes significantly to disease transmission and environmental contamination. Globally, it is estimated that 85% of total hospital waste is general, non-hazardous waste, while the remaining 15% is classified as hazardous material that may be infectious, toxic, or radioactive.

Waste management that is not carried out according to established standards can have severe negative impacts on human health, health worker safety, and environmental sustainability. In low- and middle-income countries, including Indonesia, studies have documented persistent challenges in healthcare waste management, including inadequate infrastructure, limited trained personnel, and insufficient regulatory enforcement (Karpinska et al., 2023; Singh, & Tang, 2022). Complementary evidence from cross-sectional studies in developing-country hospital settings further confirms that inadequate knowledge and

unfavorable attitudes toward waste segregation among healthcare workers remain persistent barriers to effective waste management compliance (Ibrahim, 2023). Therefore, the hospital waste management system constitutes one of the most critical aspects in supporting the quality of safe, healthy, and environmentally sustainable health services.

Hospital waste generally consists of medical waste and non-medical waste. Medical waste is waste that comes from health service activities and has the potential to pose a risk of infection and environmental pollution, such as used syringes, bandages, IV bottles, laboratory waste, masks, and medical gloves. Meanwhile, non-medical waste is in the form of domestic waste generated from the hospital's daily activities, such as plastic, paper, and food waste. Given the different characteristics of waste, a planned management system is needed in accordance with applicable procedures so as not to pose a risk to the environment and the surrounding community. Scientific literature consistently indicates that 75–90% of the waste produced in healthcare facilities is non-hazardous, while only 10–25% is classified as dangerous and requires specialized treatment (Lattanzio et al., 2022). Proper segregation of these two waste streams at the point of generation is therefore a foundational prerequisite for safe hospital waste management, as inadequate segregation knowledge among healthcare personnel constitutes one of the most critical factors contributing to improper waste handling outcomes (Miamiliotis & Talias, 2024).

A number of previous studies have demonstrated that the effective implementation of management functions exerts a significant influence on the quality of hospital waste management. Research conducted by Khansa, & Sinaga, (2023) in a case study of four public hospitals in Bogor District, Indonesia, revealed that the success of medical waste management is determined by three key factors: the adequacy of infrastructure and facilities, the professional competence of sanitation officers, and the robustness of the supervisory mechanism. Their findings emphasized that deficiencies in any one of these factors can disrupt the entire waste management chain. Similarly, Hutajulu, & Indirawati, (2022) found that hospitals with clearly delineated organizational structures for waste management exhibited significantly higher compliance rates with national environmental health standards.

Ranjbari et al., (2022) corroborated these findings in their mapping of healthcare waste management research, noting that the controlling and monitoring function was the most frequently neglected among operational management elements in healthcare settings. Collectively, the results of these studies underscore the importance of implementing all four management functions optimally and in an integrated manner to support effective, safe, and sustainable hospital waste management. In the Indonesian context specifically, an analysis of medical waste management compliance across health facilities documented that the most prevalent operational challenges include limited institutional capacity, insufficient staff training, and inadequate resources deficiencies that are directly addressable through the systematic application of management functions (Lelyana, 2024). Harapan Sehat Bumiayu Hospital, as one of the private health service facilities in Bumiayu District, Brebes Regency, Central Java Province, produces various types of medical and non-medical waste from health service activities conducted daily.

Based on the results of initial observations conducted by the research team prior to the formal data collection phase, the hospital has implemented a waste management system encompassing the stages of sorting, collecting, temporary storage, and transporting waste.

However, several observable challenges were identified during the preliminary observation: (1) inconsistencies in waste segregation practices at the point of waste generation, with some medical waste found improperly placed in general waste containers; (2) an insufficient number of color-coded waste containers in certain inpatient ward areas; and (3) the need for more systematic supervision of the daily waste handling procedures conducted by sanitation officers. These conditions suggest that while the foundational waste management system is in place, its operationalization requires strengthening through the more systematic application of management functions. This condition renders the hospital an informative and relevant site for an in-depth case study of management function implementation in healthcare waste management.

Based on this description, the formulation of the research problem in this study is: How is the management function encompassing planning, organizing, actuating, and controlling implemented in the management of medical and non-medical waste at Harapan Sehat Bumiayu Hospital, and what obstacles are encountered in its implementation?. This study aims to: (1) analyze the implementation of management functions planning, organizing, actuating, and controlling in the management of medical and non-medical waste at Harapan Sehat Bumiayu Hospital; and (2) identify the obstacles encountered in the implementation of these management functions and their consequences for environmental and occupational safety outcomes.

The urgency of this research lies in the persistent gap between regulatory standards and actual waste management practices in Indonesian private hospitals, particularly those situated in non-metropolitan areas with limited access to technical support and specialized waste treatment infrastructure. Addressing this gap is essential for protecting public health, ensuring regulatory compliance, and advancing the broader agenda of sustainable hospital management in Indonesia. Evidence from private clinic settings in other developing countries demonstrates that deficiencies in solid waste management procedures directly elevate the risk of nosocomial infections among healthcare workers, reinforcing the need for systematic and evidence-based waste governance in private hospital contexts (Ibáñez-Cruz, & Algoner, 2025).

The novelty of this research lies in its integrated analysis of all four POAC management functions as an interconnected system within the specific context of a private hospital in a peri-urban district of Central Java, Indonesia. While previous studies have examined individual management functions or focused on technical waste handling compliance, this study offers a holistic assessment that bridges management theory with field practice in an underrepresented hospital setting.

The findings are expected to contribute practically to hospital management policy by identifying specific intervention points where management function implementation can be strengthened. In particular, evidence suggests that structured educational training programs targeting healthcare workers' waste management practices can yield statistically significant improvements in waste sorting compliance, underscoring the value of training-based interventions as one such intervention point (Bannour et al., 2024). For the academic community, this study enriches the body of qualitative case study research on healthcare waste management in the Indonesian context, and provides a replicable methodological framework for similar studies in comparable settings.

METHOD

This study employs a qualitative approach with a descriptive case study design. The qualitative approach was selected because this research seeks to understand and describe in depth the complex processes through which management functions are operationalized in the context of hospital waste management phenomena that are better captured through naturalistic inquiry than through numerical measurement (Creswell & Creswell, 2017). Specifically, a single-site case study design Yin, (2018) was adopted because it enables an intensive, holistic examination of the implementation of the POAC management framework within the bounded context of one private hospital. The descriptive purpose of the research is to provide a comprehensive account of the waste management system, the implementation of each management function, the obstacles encountered, and the observed impacts on environmental quality and occupational safety.

The research was carried out at Harapan Sehat Bumiayu Hospital, Brebes Regency, Central Java Province. The selection of this research location was based on purposive considerations: the hospital is a privately operated health service institution that generates both medical and non-medical waste on a daily basis, operates a dedicated sanitation and waste management unit, and presented observable gaps between procedural standards and actual practice during preliminary observations. These characteristics rendered it a contextually rich and appropriate site for a case study of management function implementation. The data sources in this study consist of primary data and secondary data. Primary data was obtained through field observation activities and in-depth semi-structured interviews with key informants directly involved in hospital waste management.

Research informants were selected using purposive sampling, with the selection criteria including: (1) direct involvement in waste management activities or oversight; (2) a minimum of one year of tenure in the relevant role; and (3) willingness to participate. A total of seven informants participated in this study: the Head of Environmental and Sanitation Services (1 person), the Head of Facilities and Infrastructure (1 person), sanitation officers (3 persons), a clinical nurse with responsibilities for waste sorting at the unit level (1 person), and the hospital quality assurance coordinator (1 person). Data saturation was considered reached when no new themes emerged from successive interviews (Moleong, 2018). Secondary data were obtained from hospital documents including waste management SOPs, activity reports, facility inventories, and from scientific literature, peer-reviewed journals, and regulatory documents relevant to hospital waste management.

Data collection was conducted through three techniques: observation, interviews, and documentation. Structured observations using an observation guide were carried out on five separate occasions over a period of three weeks to directly document the processes of waste sorting, collection, temporary storage, transportation, and disposal at the hospital. Semi-structured interviews were conducted individually with each of the seven informants, with each interview lasting approximately 45 to 60 minutes. Interview sessions were audio-recorded with the consent of participants and subsequently transcribed verbatim. An interview guide developed from the POAC theoretical framework served as the primary instrument, ensuring systematic coverage of all four management functions while allowing for exploratory follow-up questions. Documentation was employed to gather corroborating data from hospital records,

waste management SOPs, facility audit reports, and photographic evidence of waste handling practices.

Data analysis was conducted using the interactive analysis model proposed by Miles, & Saldana, (2014) as further elaborated by Saldãa (2021), which comprises three iterative stages: data condensation (reduction), data display (presentation), and conclusion drawing and verification. In the data condensation stage, raw field notes, interview transcripts, and documentary evidence were systematically reviewed, coded, and organized into thematic categories aligned with the four POAC management functions. In the data display stage, the condensed data were presented in the form of descriptive narratives and thematic matrices to facilitate systematic interpretation.

In the conclusion drawing stage, findings were synthesized and verified against the theoretical framework and existing literature to produce a coherent account of management function implementation at Harapan Sehat Bumiayu Hospital. To ensure data credibility, triangulation was performed through three mechanisms: source triangulation (cross-checking data across multiple informants), method triangulation (comparing findings from interviews, observations, and documentation), and theoretical triangulation (interpreting findings in relation to multiple theoretical perspectives). Member-checking was also conducted by sharing preliminary findings with two key informants to verify the accuracy of interpretation (Moleong, 2018).

RESULT AND DISCUSSION

Overview of Harapan Sehat Hospital Bumiayu

Harapan Sehat Bumiayu Hospital is a private hospital located in Bumiayu District, Brebes Regency, Central Java Province. This hospital is present as one of the health service institutions that aims to meet the community's needs for fast, safe, and quality health services. In carrying out its functions, hospitals are not only oriented towards medical services, but also strive to create a healthy, safe, and environmentally friendly environment through various management systems implemented.

Organizationally, Harapan Sehat Hospital has several work units that support health service operations, including medical services, nursing, administration and finance, facilities and infrastructure, as well as sanitation and waste management sections. The existence of a waste management unit shows the hospital's commitment to maintaining environmental quality and minimizing the negative impact of waste on public health and the surrounding environment.

Medical and Non-Medical Waste Management System

Waste management at Harapan Sehat Hospital is carried out through several stages which include sorting, collection, temporary storage, and transportation and destruction of waste. The system is implemented to ensure that waste generated during the health service process can be handled safely and in accordance with applicable procedures.

The waste produced by hospitals consists of medical waste and non-medical waste. Medical waste includes used syringes, bandages, IV bottles, laboratory waste, masks, and medical gloves. Meanwhile, non-medical waste is in the form of plastic waste, food waste, and various other domestic waste that comes from hospital activities.

The waste sorting process is carried out since the waste is generated in each service unit. Medical and non-medical waste are placed in different containers according to their respective categories. This separation aims to reduce the risk of mixing hazardous waste with domestic waste which can increase the potential for disease spread. After sorting, the waste is collected by sanitation officers in accordance with the established operational procedures. The medical waste is then placed in a temporary storage area before the transportation and destruction process is carried out by the authorities. This management shows that there are systematic efforts to maintain the safety of the hospital environment and the safety of officers involved in the waste management process.

Implementation of Management Functions in Waste Management

Planning

Based on the results of field observations and interviews, the planning function in waste management at Harapan Sehat Bumiayu Hospital has been implemented through several concrete mechanisms. These include the provision of color-coded waste containers distributed across all service units (yellow bins for infectious waste, black bins for domestic waste, and red bins for highly infectious waste), the procurement of personal protective equipment (PPE) for sanitation workers including gloves, aprons, masks, and safety footwear, and the establishment of a written waste collection and transportation schedule specifying the frequency and route of waste collection from each service unit. In an interview with the Head of Environmental and Sanitation Services, it was stated that: “We have prepared a complete SOP for waste management, starting from sorting at the point of generation through to final disposal. Every new officer must study and be trained on this SOP before they begin work.” (Informant 1, Interview, 2024).

This statement indicates that planning at Harapan Sehat Bumiayu Hospital is not merely administrative but is operationalized through formal training and procedural documentation. However, observations also revealed that the number of containers in certain inpatient wards was insufficient, indicating that the planning function has not been fully realized across all operational areas of the hospital. In addition to physical infrastructure, the hospital has formulated an annual work plan for the sanitation and environmental health unit that includes targets for waste reduction, schedule revisions, and equipment procurement.

Observation and documentary evidence revealed that the hospital maintains a waste activity log that records the daily volume of waste collected by type, which serves as a basis for planning periodic improvements. This planning practice aligns with the findings of Tseng, et.al, (2022), who identified proactive and data-informed planning as a distinguishing characteristic of healthcare institutions that achieved high compliance with waste management standards in the Indonesian context. Comprehensive and well-implemented planning is therefore a foundational factor in minimizing the risk of environmental pollution from hospital waste and in supporting the health and safety of all hospital occupants.

Organizing

The organizing function at Harapan Sehat Bumiayu Hospital is manifest in the structured division of duties and responsibilities across multiple levels of the waste management hierarchy. Based on interviews and documentary review of the hospital’s organizational

structure, three distinct operational layers can be identified: (1) the management level, represented by the Head of Facilities and Infrastructure who holds responsibility for overall oversight and resource allocation; (2) the supervisory level, represented by the Head of the Environmental and Sanitation Services Unit who coordinates daily waste management activities; and (3) the operational level, represented by sanitation officers and cleaning staff who directly handle waste collection, transportation, and temporary storage.

The Head of Facilities and Infrastructure confirmed: “Each officer has a clearly defined area of responsibility. Sanitation officers are assigned to specific floors and service units, so accountability for waste handling in each area is clear.” (Informant 2, Interview, 2024). The organizational structure supporting waste management enables more effective coordination across the various stages of waste handling, from collection at the point of generation through to final disposal. However, observation findings indicated that coordination between clinical nursing staff and sanitation officers at the unit level was occasionally inconsistent, particularly regarding the timing of waste placement and the use of appropriate waste containers.

Informant 4, a clinical nurse, acknowledged: “Sometimes we are busy with patient care and we do not always have time to ensure the waste is placed in the right container right away.” (Informant 4, Interview, 2024). This gap in coordination suggests that while the organizational framework is formally established, its effectiveness in practice is contingent on sustained cross-departmental communication and a shared organizational culture of environmental responsibility. This observation is consistent with Hutajulu et al., (2022), who noted that organizational clarity must be accompanied by active coordination mechanisms to be operationally effective.

Actuating

The actuating function at Harapan Sehat Bumiayu Hospital is operationalized through the systematic daily execution of waste management procedures by sanitation officers and cleaning staff. Based on field observations conducted across five visits, waste collection from service units is performed twice daily in the morning (between 06.00 and 08.00) and in the afternoon (between 14.00 and 16.00) in accordance with the established schedule. Sanitation officers use dedicated trolleys to transport collected waste from each service unit to the hospital’s temporary waste storage facility (TPS), where medical and non-medical waste are stored separately prior to transportation for final treatment and disposal.

One sanitation officer described the actuating process as follows: “Every morning I check all the waste bins in my assigned area, collect the waste using the trolley, and bring it to the TPS. I always wear gloves and a mask when doing this.” (Informant 3, Interview, 2024). This testimony, corroborated by observational evidence, confirms that the actuating function is executed with a degree of regularity and procedural fidelity that reflects the hospital’s commitment to environmental cleanliness and occupational safety.

In the implementation process, all sanitation officers are required to use personal protective equipment (PPE), including rubber gloves, masks, aprons, and safety boots, as mandated by the hospital’s SOP in compliance with the Minister of Health Regulation Number 7 of 2019. Observations confirmed that PPE compliance among sanitation officers was generally high; however, one instance was observed during the study period in which an officer transported waste without wearing the designated protective footwear. This singular deviation

notwithstanding, the overall consistency of implementation reflects the hospital management's commitment to maintaining a safe working environment. The results of this study corroborate the findings of Kenny & Priyadarshini, (2021), who identified the routine and compliant use of PPE as the most critical factor in reducing occupational health risks associated with healthcare waste handling. The consistent actuating function therefore not only ensures operational continuity but also serves as a direct mechanism for protecting staff health and safety.

Controlling

The controlling function at Harapan Sehat Bumiayu Hospital is implemented through a multi-level supervisory mechanism designed to ensure that all stages of waste management conform to established standard operational procedures (SOPs). Supervision is exercised at the operational level by the Head of the Environmental and Sanitation Services Unit, who conducts daily monitoring rounds to verify that waste collection has been completed on schedule and that sorting procedures have been followed correctly. At the institutional level, the hospital's quality assurance coordinator conducts periodic audits approximately once per month to evaluate the overall waste management system against internal standards and the requirements of the Regulation of the Minister of Health Number 7 of 2019.

The quality assurance coordinator explained: "We have an internal audit checklist that covers every aspect of waste management, from sorting to disposal. The results of each audit are discussed in our monthly management meeting and corrective actions are assigned to responsible officers." (Informant 7, Interview, 2024).

Through these monitoring activities, the hospital management is able to identify operational deviations and initiate timely corrective measures. Supervisory records reviewed during the documentation phase revealed that the most frequently recorded non-compliance issues over the preceding six months were: (1) improper disposal of sharps waste in general waste containers (recorded in 4 out of 6 monthly audit reports); and (2) failure to properly label waste containers in temporary storage areas (recorded in 3 out of 6 monthly audit reports). These findings suggest that while the controlling function is institutionally operationalized, its effectiveness in producing lasting behavioral change among all staff members requires further reinforcement.

This observation aligns with Ranjbari et al., (2022), who found that monitoring and controlling functions were the most inconsistently applied in healthcare waste management settings, and argued that supervision must be accompanied by systematic feedback loops and targeted training to be fully effective. Controlled studies examining the impact of educational training interventions in tertiary hospital settings similarly demonstrate that structured, audit-based training cycles yield statistically significant improvements in waste sorting compliance, with overall compliance rates increasing markedly following dedicated training sessions Bannour et al., (2024), reinforcing the view that supervision alone is insufficient without accompanying competency development.

Obstacles in Waste Management

Although the waste management system at Harapan Sehat Bumiayu Hospital has been institutionally established and is generally functioning, several significant obstacles were identified through observations, interviews, and documentary review. The first and most prominent obstacle is the inconsistency in waste segregation discipline among staff members, particularly clinical personnel in inpatient wards. Despite existing SOP requirements, observational evidence from three of the five observation sessions documented instances of non-infectious waste (e.g., packaging materials, food waste) being placed in yellow infectious waste containers. One sanitation officer noted: “Sometimes when we go to collect waste, we find that the containers have already been mixed. We have to re-sort it ourselves, which takes more time and increases our own exposure risk.” (Informant 5, Interview, 2024).

This finding is consistent with Khansa et al., (2023), both of whom identified staff non-compliance in waste segregation as one of the most persistent and consequential challenges in Indonesian healthcare waste management. These findings resonate with broader Indonesian evidence showing that inadequate institutional capacity and staff training are systemic determinants of poor waste management compliance across health facilities in Indonesia (Lelyana, 2024). Furthermore, cross-hospital studies have documented that knowledge deficits regarding color-coding systems and infectious waste categories among clinical personnel are directly associated with incorrect segregation outcomes, reinforcing the need for targeted competency-based training as part of any comprehensive waste governance strategy (Miamiliotis & Talias, 2024).

A second significant obstacle pertains to the adequacy of waste management infrastructure. Field observations identified a shortage of color-coded waste containers in two of the hospital’s five inpatient wards, forcing staff in these areas to share containers across service areas a practice that elevates the risk of cross-contamination. Furthermore, the hospital’s temporary waste storage facility (TPS) was observed to have limited capacity relative to the volume of waste generated on peak service days, and was accessed by personnel without consistent use of proper PPE in two observed instances. A third obstacle relates to the supervision intensity required for medical waste management.

Given the infectious and potentially hazardous nature of certain medical waste streams including sharps, laboratory samples, and pharmaceutical waste the level of supervision required is substantially higher than for non-medical waste, yet available supervisory resources are shared across all waste categories. These combined obstacles highlight the need for a more resource-intensive and targeted approach to waste management governance, including dedicated supervisory staff, systematic staff training programs, and capital investment in infrastructure upgrades. Evidence from private healthcare settings in other developing countries corroborates this, demonstrating that comprehensive solid waste management strategies integrating staff training, proper conditioning of storage areas, correct segregation protocols, and safe internal transportation can substantially reduce nosocomial infection risks associated with bloodborne pathogen exposure (Ibáñez-Cruz et al., 2025).

The Impact of Waste Management on the Environment and Occupational Safety

Waste management that is carried out properly has a positive impact on the hospital environment and the occupational safety of health workers. The hospital environment becomes

cleaner, healthier, and more comfortable for patients, medical personnel, and visitors. In addition, waste management according to procedures can reduce the risk of spreading infections and environmental pollution. From the aspect of occupational safety, the use of personal protective equipment and a structured waste management system help protect officers from the risk of work accidents and exposure to infectious materials. Thus, waste management not only functions as an effort to protect the environment, but also as part of the implementation of occupational safety and health (K3) in hospitals.

All four functions planning, organizing, actuating, and controlling have been implemented across the various stages of the waste management system, contributing to the establishment of a structured and procedurally grounded approach to waste handling. The table below presents a summary of findings for each management function: In terms of the planning function, the hospital has developed and implemented a formal waste management SOP, established a color-coded waste container system aligned with national standards, and prepared a structured waste collection schedule demonstrating a proactive and systematic approach to waste management planning.

Regarding the organizing function, a clear hierarchy of responsibility has been established among management, supervisory, and operational staff, with defined roles for each position in the waste management chain. In terms of the actuating function, waste collection and transportation activities are executed twice daily in accordance with the established schedule, with mandatory PPE use for all sanitation personnel. With respect to the controlling function, a multi-tiered supervisory system incorporating daily operational monitoring and monthly institutional audits has been implemented to verify procedural compliance and identify corrective action needs.

These findings are broadly aligned with prior research. Khansa et al., (2023) similarly found that waste management effectiveness in Indonesian hospitals is significantly associated with the provision of adequate facilities, staff competency, and supervisory quality all dimensions addressed by the POAC framework. Tseng et al., (2022) further emphasized that healthcare organizations that integrate management functions in a coordinated and systematic manner demonstrate higher levels of procedural compliance and environmental health outcomes compared to those that apply management functions selectively or inconsistently. However, the results of the present study also reveal tensions and gaps in the implementation of these functions particularly in the controlling and organizing dimensions that distinguish this case from idealized theoretical models.

These tensions, characterized by inconsistent waste segregation behavior and limited supervisory resources, suggest that the mere formal adoption of a management framework is insufficient without adequate institutional support, ongoing staff capacity development, and systematic feedback mechanisms. As systematic reviews of healthcare waste management in hospital settings indicate, sustainable outcomes require that waste governance extends beyond procedural compliance to encompass organizational culture, adequate infrastructure, and continuous staff engagement (Lattanzio et al., 2022). The present study therefore contributes to the literature by illustrating the conditions under which the POAC framework operates effectively and the specific organizational factors that constrain its full realization in a private hospital setting in peri-urban Indonesia.

CONCLUSION

This study concluded that the implementation of management functions in the management of medical and non-medical waste at Harapan Sehat Bumiayu Hospital has been carried out through the four POAC functions. The planning function is reflected in the existence of waste management SOPs, a color-coded container system, and a structured collection schedule. The organizing function is evident in the clear division of responsibilities between management, supervisors, and operational staff. The implementation function is realized through twice-daily waste collection and transportation activities, accompanied by mandatory use of PPE. The oversight function is operationalized through daily monitoring by unit heads and monthly institutional audits.

The implementation of these functions contributes to maintaining a clean hospital environment, reducing the risk of infection spread, and improving the occupational safety of healthcare workers and sanitation workers. However, several significant barriers remain, including inconsistent waste sorting behavior among clinical staff, limited waste containers in some inpatient units, and inadequate waste disposal site capacity. Based on these findings, the hospital is advised to increase waste container facilities, conduct regular training for all staff, and strengthen oversight mechanisms, particularly for medical waste. Further research with a multi-site or mixed-methods design is recommended to expand the generalizability of these findings.

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