
(Research/Review)

Review of Infectious Medical Waste Management System at Haji Hospital Makassar

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Abstract: Environmental health such as proper medical waste management in accordance with existing requirements. The purpose of this study was to determine the sources of infectious medical waste at RSUD Haji Makassar. The research method used is a qualitative method with a post-positivistic or enterprising approach and observation. The types of data used are primary and secondary data. The results of the study indicate that at the sorting and reduction stage it has been implemented but in the sorting section there are still errors in plastic bags not being labeled regarding the type of waste, at the storage stage there are still errors in temporary storage places that can be accessed by animals, at the transportation stage there are still some that are not in accordance with the Regulation of the Minister of Environment and Forestry Number 56 of 2015 such as medical waste managers also do not use complete personal protective equipment and do not have a special route for waste transportation, at the processing stage it is not carried out because the incinerator in the hospital does not have an operational permit and at the stockpiling and burial stages it is also not carried out because medical waste management has been handed over to a third party. RSUD Haji Makassar pays more attention to all waste management processes that are not yet adequate and the management of incinerator use permits for better waste management.

Keywords: Environmental Health, Hospital, Infectious, Management System, Medical Waste.

1. Introduction

Hospitals are very complex, dynamic, competitive, capital-intensive and labor-intensive institutions, multidisciplinary in nature and influenced by a constantly changing environment. However, it must continue to carry out its role as a social service provider, prioritizing community service and always considering financial principles. Hospitals must have service facilities at least general medical services, emergency services, medical services, outpatient services, inpatient services, surgery/basic surgical services, health services, pharmacy, nutrition, sterilization, medical records, administrative and management services, general services. Services. Health education, physical therapy, laundry and emergency care, hospital facility maintenance and waste management. (Herawaty, 2021).

Hospitals are an integral part of a social and health organization with the function of providing comprehensive services, curative and preventive services to the community, World Health Organization (WHO) 2021. A hospital is a health service institution that provides comprehensive individual health services that provide inpatient, outpatient and emergency services (Government Regulation number 47 of 2021).

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Health services provided to the community are one of the tasks of the hospital which can produce various types of medical waste so that environmental health must be able to manage them properly according to the requirements. Environmental problems are closely related to the world of health such as hospitals, to achieve healthy health conditions, a good environment is also needed in this case, health service facilities where groups of people with diseases, groups of service providers, groups of visitors and groups of the surrounding environment meet (A.R Amelia et al., 2020).

Patient satisfaction depends on the quality of service. Service means all efforts of employees to fulfill the desires of their customers through the services provided. A service is considered good for a patient, determined by whether the service provided is able to satisfy the patient's needs, according to the patient's perception of the service (satisfactory or disappointing, including the length of service).

The implementing regulations are the regulation of the Minister of Health No. 755/menkes/per/IV/2011 concerning the implementation of medical committees in hospitals, the medical committee is responsible for credentialing all medical staff who provide medical services, maintaining discipline, ethics and professional behavior, assisting the director in compiling medical staff by law and assisting in its implementation, compiling legal ethics policies and procedures, improving education and training as well as research and development in the medical field and monitoring and evaluating the quality of medical services, surgical cases, drug use, pharmacy, therapy, accuracy, completeness and accuracy of medical records, mortality and morbidity medical review/peer review/medical audit through the formation of sub-committees (PERMENKES RI, 2011).

The quality of health services refers to the level of perfection of health services in creating a sense of satisfaction in each patient. The more perfect the satisfaction, the better the quality of health services. Everyone has their own assessment of the quality of services provided by health service providers even though the quality of health services provided is the same (Najib, 2022).

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2. Literature Review

Hospital organization is a unique and complex organization. Unique because the hospital is a unique and complex organization. Unique because in the hospital there is a process that produces hotel services as well as medical services, nurses in the form of services to patients who are hospitalized or outpatients. Complex because there are very complicated problems where the hospital is a dense organization in which there are various kinds of treatment facilities, various kinds of equipment and those faced are people who are

emotionally unstable, emotionally tense, because they are sick, including the patient's family. Therefore it can be said that hospital services are much more complex than a hotel. Service quality is an important part of the hospital. Patients view quality health services as health services, so that patient needs can be met, even politely and kindly, on time, responsive and understanding patient complaints (Pohan, 2015). The description of the concept of service quality is largely determined by the difference between customer perceptions of the reality of the services provided and what customers should expect from the service (Ahmad et al., 2022).

Good service quality is measured not only by luxury, technical perfection and appearance of equipment, but also by the attitude and behavior of staff who must reflect professionalism and commitment. In order to improve the environment, patient rooms and Puske facilities, a satisfaction survey was conducted regarding intake. Everyone has the right to obtain health services that meet their needs at affordable prices in a standardized health service environment, and has the right to obtain information about better and quality health and services. it is still low. These problems can be identified by listening to patient complaints about the quality of health services, starting from the attitude of officers in serving patients, the inadequate room system and the quality of the health center. this also affects patient satisfaction with the quality of service (Mughtar et al., 2023). The medical committee is a non-structural forum whose members are selected, from the head of the functional medical staff (SMF) or those representing the SMF in the hospital. The medical committee is under and responsible to the president director (PERMENKES RI, 2011)

In Indonesia, the existence of a medical committee is based on the regulation of the Minister of Health of the Republic of Indonesia number 755/Menkes/Per/IV/2011 concerning the implementation of a medical committee in a hospital. According to this health regulation, the medical committee is a hospital apparatus to implement clinical governance so that the professionalism of medical staff in the hospital is maintained by controlling medical staff who provide medical services in the hospital. This control is carried out by regulating in detail the authority to provide medical services (delineation of clinical privileges). This control is carried out simultaneously by the head/director of the hospital and the medical committee. The medical committee carries out credentials, improves the quality of the profession, and enforces professional discipline and recommends follow-up actions to the hospital director. Meanwhile, the hospital director follows up on the recommendations of the medical committee by mobilizing all resources so that the professionalism of the medical staff can be implemented in the hospital.

The concept of professionalism above is based on a social contract between the medical profession and society. On the one hand, the medical profession agrees to protect society by screening (credentialing) medical staff who will practice in society. Only good (credible) medical staff are allowed to provide services to the community, this is done through a licensing mechanism. Meanwhile, medical staff who do not yet meet the requirements can undergo a coaching process (proctoring) in order to have the necessary competencies so that they can be allowed to provide services to the community after going through credentials. On the other hand, the medical staff profession group obtains the privilege to practice medicine exclusively, and no other party may do so. With this privilege, medical staff can obtain economic benefits and professional prestige. However, if there are medical staff who

violate professional standards, professional disciplinary action can be taken. This disciplinary action is in the form of a suspension of the privilege (suspension of clinical privilege) so that the community is protected from unprofessional medical practitioners.

3. Proposed Method

This study uses a qualitative method. Qualitative research methods are research methods based on postpositivism or enterpretive philosophy, used to research natural object conditions. This research was conducted at the Haji Makassar Regional Hospital, this hospital is a type B hospital located at Jl. Dg. Ngeppe No. 14 Tamalate District, Parang Tambung Village. Informants are people who are sources of data in qualitative research to obtain the information needed in the study (Nur Sayidah, 2018). In this study, informants were determined by Purposive sampling. Purposive sampling is a sampling technique based on certain considerations.

4. Results and Discussion

Reduction and Sorting

Based on the results of the interviews that have been conducted, it can be seen that the reduction of medical waste at RSUD Haji Makassar is less known by informants, however, in the sorting process all informants provided the same information that sorting is carried out using special containers available in each treatment area and separated according to the color of the existing container such as yellow for infectious waste, brown for pharmaceutical waste, red for radioactive waste and black for non-medical. The use of PPE for waste sorting, infectious waste management officers use safety shoes, safety clothes, masks and gloves. Based on the results of observations, it was found that each treatment room had been provided with a special trash bin for infectious medical waste. This is in accordance with what was stated by the informant.

Storage

Based on the results of the interviews that have been conducted, it can be seen that the storage of infectious medical waste at RSUD Haji Makassar starts from the treatment room then the Cleaning Service transports the medical waste using a special trolley to the TPS, there are no obstacles during the storage process, the storage time limit at RSUD Haji Makassar is carried out every 7 days before being transported by a third party. Based on the results of observations at the TPS RSUD Haji Makassar can be accessed by animals, insects and birds, this is because the room has very open air ventilation.

Transportation

Based on the results of the interviews that have been conducted, it can be seen that the transportation of medical waste at RSUD Haji Makassar has a special procedure in transferring medical waste to a third party, namely officers must use PPE, officers from the third party pack and weigh the medical waste to be transported and then put into the transport vehicle, transportation from the waste generating location is carried out by the cleaning service by seeing whether the medical waste in the waste generating location is full or according to the amount of medical waste in the medical waste sorting location in each room. RSUD Haji Makassar does not have a special route for transportation, only using corridors or corridors that connect one area to another in a building.

Infectious medical waste has accumulated in the TPS for several months, this happened because the medical waste produced was not transported by a third party. Based on information from informant 01, the waste was not transported because there was a problem with the third party who experienced obstacles such as heavy rain, problems at PT. KIMA because the incinerator was problematic or the incinerator was under maintenance.

Processing

Based on the results of the interview, it can be seen that the processing of infectious medical waste is not carried out at RSUD Haji Makassar because the incinerator is not functioning or is damaged so that the processing is handed over to a third party.

Hoarding and Burial

Hoarding and burial of infectious medical waste at RSUD Haji Makassar is not carried out because the medical waste produced is managed by a third party

5. Conclusions

Sorting and reduction in the management of infectious medical waste at RSUD Haji Makassar has been carried out, while reduction has not been carried out in the sorting process, but the labeling of plastic bags is still inadequate. Storage in the management of infectious medical waste at RSUD Haji Makassar has been carried out and the storage process is carried out for 7 days before being handed over to a third party and the TPS used is still inadequate because it can be accessed by animals because the air ventilation is too wide. Transportation in the process of managing infectious medical waste at RSUD Haji Makassar has been carried out and starts from the waste generating site and will be transported by the cleaning service two to three times a day, while transportation by a third party is carried out once a week, but in the transportation process there are still inconsistencies with Permen LHK Number 56 of 2015 concerning the use of PPE. Processing in the infectious medical waste management process at RSUD Haji Makassar was not carried out due to inadequate facilities such as incinerators that do not have operational permits so that the hospital carries out external processing by collaborating with third parties, namely PT. Berkah Rahayu Indonesia Sulsel and PT. KIMA. Stockpiling and burial in the infectious medical waste management process at RSUD Haji Makassar was not carried out because the hospital had never done so and had handed over medical waste to third parties for management.

References

- [1] A. A. Purwanti, *Pengelolaan Limbah Padat Bahan Berbahaya dan Beracun (B3) Rumah Sakit di RSUD Dr. Soetomo Surabaya*, 2018.
- [2] C. Andolo, D. V. D. Doda, dan L. E. N. Tendean, "Analisis Pelaksanaan Sistem Pengelolaan Limbah Medis di Rumah Sakit Daerah Kepulauan," 2023.
- [3] Denzin dalam L. J. Moleong, *Penguraian Empat Bagian Triangulasi*, 2017.
- [4] M. F. Khatami, M. Mirwan, dan S. Aulidia, "Evaluasi Sistem Pengelolaan Limbah Padat Bahan Berbahaya dan Beracun (B3) di Rumah Sakit X Surabaya," 2023.
- [5] M. Urbanita, "Analisis Pengelolaan Limbah Medis Padat di Puskesmas Sukajadi Wilayah Kecamatan Talang Kelapa," 2022.
- [6] Peraturan Menteri Kesehatan Nomor 4 Tahun 2018, *Tentang Kewajiban Rumah Sakit dan Kewajiban Pasien*.
- [7] Peraturan Menteri Kesehatan Republik Indonesia Nomor 18 Tahun 2020, *Pengelolaan Limbah Medis Fasilitas Pelayanan Kesehatan Berbasis Wilayah*.

- [8] Peraturan Menteri Kesehatan Republik Indonesia Nomor 7 Tahun 2019, *Tentang Kesehatan Lingkungan Rumah Sakit*.
- [9] Peraturan Menteri Lingkungan Hidup dan Kehutanan Republik Indonesia Nomor P.56/Menlhk-Setjen/2015, *Tentang Tata Cara dan Persyaratan Teknis Pengelolaan Limbah Bahan Berbahaya dan Beracun dari Fasilitas Pelayanan Kesehatan*.
- [10] Peraturan Pemerintah Nomor 47 Tahun 2021, *Tentang Penyelenggaraan Bidang Perumhaskitan*.
- [11] R. Amelia, A. Ismayanti, dan A. R. Rusyid, "Pengelolaan Limbah Medis Padat di Rumah Sakit Umum Daerah Mamuju Provinsi Sulawesi Barat," 2020.
- [12] R. M. Diwanti, "Studi Pengelolaan Limbah Medis Padat di RSUD Kabupaten Sidoarjo," 2016.
- [13] R. M. Yulia, "Efektivitas Pengelolaan Sampah oleh Dinas Lingkungan Hidup Kabupaten Aceh Besar," 2020.
- [14] S. Rachmawati, E. Sumiyarningsih, dan T. B. Atmojo, "Analisis Manajemen Pengelolaan Limbah Padat Medis B3 di Rumah Sakit Universitas Sebelas Maret Surakarta," 2018.