
**CRIMINAL SANCTIONS FOR TOXIC AND HAZARDOUS MATERIALS
WASTE MANAGEMENT IN HOSPITALS OR HEALTH FACILITIES**

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ABSTRACT

Keywords: Hospital; Waste; Management. As a health service facility, the hospital is a gathering place for sick and healthy people, can be a place for disease transmission, and allows environmental pollution and health problems. Today's management of the hospital environment is no longer a consumptive partial part but is a series of cycles and management strategies for homes. This type of research uses normative juridical and normative juridical to examine or analyze secondary data in the form of legal materials, especially primary and secondary legal materials, by understanding law as a set of regulations or positive norms in the legal system that regulates human life. Hospital waste can contain a variety of microorganisms, depending on the type of hospital, the level of treatment carried out before disposal, and the type of facility present. Based on research on B3 waste in the field of environment and its impact on health, it can be concluded that clinical waste from hospital-supporting activities produces non-medical waste, including from offices/administration, service units (cartons, cans, bottles), patient rooms, food waste, and kitchen waste.

**Introduction**

Hospitals, as a means of health services where sick and healthy people gather, can cause disease transmission, environmental pollution, and health problems (Aripkah, 2020). Environmental management of the Hospital today is no longer a partial part of consumption (Mubarok, 2023). However, it is a series of cycles and strategies of Hospital management to develop the capacity of Hospital environmental management to provide direct or indirect benefits directly to improve the quality of hospital services. Hospital environmental management has complex problems (Suhartono, 2017). One of them is the problem of hospital waste, which is very sensitive to government regulations. The Hospital, as one of the largest waste producers, has the potential to cause pollution to the surrounding environment, which will harm the community and even the Hospital itself (Purwanto, Al Amin, Mardiyah, & Wahyuningtyas, 2020).

Some community groups are at risk of getting disturbances because of hospital buildings. First, patients come to the hospital for medical help and care. This group is the most vulnerable. Secondly, hospital employees, when carrying out their daily duties, are always in contact with sick people who are the source of disease agents (Duvernoy, 2023). Third, for visitors/ushers of sick people who visit the hospital, the risk of health problems will be even greater (Adrian & Sabri, 2023). The four communities live around the hospital, especially if it disposes of its waste products improperly into the surrounding environment. The result is that the quality of the environment decreases, with the further consequence being a decrease in the degree of public health in the environment (Gordon,

2018). Therefore, hospitals must perform excellent and correct waste management through sanitation activities (Junaidi, Simbolon, Siahaan, & Batu, 2023).

Other activities that produce waste are radiology, nuclear medicine, cancer treatment, laboratory waste, and partly waste containing B3 (Annisa, 2020). In other words, B3 liquid waste can impact health in various ways due to contact with B3 or exposure to pollutants (Noor, 2020). Hence, the health impacts that arise vary from mild to moderate to severe and even cause death, depending on the dose and travel time. Not only that, but the process of activities in the hospital can affect the social and cultural environment, and in carrying out these efforts, it can use technology that is estimated to have significant environmental potential (Fildzah, 2022).

Indonesia is a developing country where development efforts in all fields are being promoted on a large scale, so natural resources are needed to develop (Salsabiela, 2017). However, this situation has undergone many changes in addition to the decay in quantity and quality. The decline occurred due to interactions/activities from the world, regional, and national communities (Wisnubroto, 2020). The development will not achieve significant progress without being accompanied by increasing industrialization activities. Based on the general explanation of Environmental Law Number 32 of 2009 (Amendment to Law Number 23 of 1997), development is a conscious effort to manage and utilize resources to improve people's quality of life. So, that development can be said to be an effort by the government and all levels of our society to achieve welfare for the people of the nation and state (Khamimah, 2021).

Development produces benefits in all areas of life, including health. However, in addition to producing benefits, development will cause changes to the environment and natural resources because, in essence, development is an overhaul or change in the direction to which it aspires. Without development, prosperity cannot be achieved, and a good and healthy environment is impossible for us to realize. To be able to achieve prosperity and a good and healthy living environment, development absolutely must be implemented. However, this development activity can also pose a threat that can hurt health, lifestyle, and the environment itself. Therefore, according to the 1st General Explanation of Law Number 32 of 2009 concerning Environmental Protection and Management, the state, government, and all stakeholders are obliged to carry out environmental protection and management in the implementation of sustainable development so that the Indonesian environment can remain a source and support for the Indonesian people and other living things.

The benefits of this study are:

1. Legal Awareness
2. Increased Compliance
3. Environmental Protection
4. Public Health Risk Reduction
5. Strengthening the Legal System
6. Community Awareness Raising

The objectives of this study are:

1. Analyze the problems of medical and non-medical waste management in hospitals or health facilities
2. Analyze the form of criminal liability for B3 waste management in hospitals or health facilities

Research Methods

a. Types of Research

In discussing the above problems, this type of research uses normative juridical, normative juridical is to examine or analyze secondary data in the form of legal materials, especially primary legal materials and secondary legal materials, by understanding law as a set of regulations or positive norms in the legal system that regulates human life.

b. Problem Approach

In this normative juridical research, a statutory approach (Statute Approach) is used, which examines all laws and regulations related to the legal issues being handled. Moreover, the conceptual approach (Conceptual Approach) departs from the views and doctrines that developed in legal science. By studying the views and doctrines of law, researchers will find ideas that give birth to legal understandings. Legal concepts and legal principles relevant to the issue at hand. Understanding these views and doctrines is a backbone for researchers in building a legal argument to solve the legal issues.

c. Sources of Legal Materials

The sources of legal materials used in writing this Thesis were obtained:

1) Primary Legal Materials

The primary legal materials in this study are in the form of the Constitution of the Republic of Indonesia Year 1945, Criminal Code, Law Number 18 of 2008 concerning Waste, Law Number 10 of 2009 concerning Tourism, Law Number 32 of 2009 concerning Environmental Protection and Management. Law Number 44 of 2009 concerning Hospitals. Regulation of the Minister of Tourism and Creative Economy of the Republic of Indonesia Number PM.106/PW.006/MPEK/2011 concerning Hotel Security Management System. State Gazette of the Republic of Indonesia Year 2012 Number 37. Minister of Health Regulation Number 3 of 2020 concerning Hospital Classification and Licensing. State Gazette of the Republic of Indonesia in 2020 Number 21. Decree of the Minister of Health of the Republic of Indonesia Number 1204/Menkes /SK/X/2004 concerning Hospital Environmental Health Requirements.

2) Secondary Legal Material

Obtained literature studies that are relevant to the subject matter, consisting of literature, as well as opinions or opinions of experts and legal practitioners on the internet and a collection of legal theories from legal experts.

3) Tertiary Law Materials

d. Legal Material Collection and Processing Procedures

The procedure for collecting primary legal materials begins with understanding the legal norms of supporting laws and regulations. Then proceed with the collection and

review of secondary legal materials, namely the opinions of legal experts as stated in the literature, books, or other sources, after it is felt that sufficient legal materials are sorted out by the writing systematics so that it is expected to get a clear and constructive picture of the existing problems.

e. Legal Material Analysis

After the legal material is classified, an analysis uses legal interpretation and relevant legal theories; deductive conclusions are drawn. Based on the laws and regulations used as the basis for this study, then linked or applied to the criminal liability of B3 waste management in hospitals or health facilities, conclusions are drawn.

Results and Discussion

Hospital Medical Waste Classification

In every place where people gather, there will always be waste produced and requires disposal, as well as hospitals, which are healthcare facilities where sick and healthy people gather and produce waste. The forms of waste or medical waste vary and, based on the potential hazards posed, can be grouped as follows;

1. Sharps Waste, a solid material with an angle of less than 90 degrees, can cause cuts or punctures, for example, Syringes, glass preparations (glass preparations), infuse sets, ampoules/vials of drugs, etc.
2. Infectious waste is waste that is suspected to contain pathogens (bacteria, viruses, parasites, and fungi) in sufficient quantities to cause disease in susceptible hosts, for example, culture and stock of infectious agents from laboratory activities, Waste from surgery or autopsy from patients suffering from infectious diseases, Waste of patients suffering from infectious diseases from isolation parts, Tools or other materials touched by sick people.
3. Pathological waste, or Body Tissue, is derived from human body tissues, such as fetal organs and blood, vomit, urine, and other body fluids.
4. Pharmaceutical waste contains pharmaceutical ingredients, including pharmaceutical products, vaccines, expired serums, drug spills, gloves, masks, etc.
5. Chemical waste contains chemicals derived from diagnostic activities, hygiene maintenance, and disinfectants, such as formaldehyde, photographic chemicals, and solvents.
6. Pressurized Packaging Waste is medical waste originating from activities in health institutions that require gas, for example, gas in cartridge tubes and aerosol cans.
7. Heavy Metal Waste, medical waste containing heavy metals in high concentrations, is included in the sub-category of hazardous waste and is usually very toxic; for example, Mercury metal waste from leaking medical equipment (thermometers, blood pressure measuring devices).
8. Plastic waste is a plastic material disposed of by clinics, hospitals, and other health care facilities, such as disposable items made of plastic and also coatings of medical equipment.

In addition to clinical waste from hospital-supporting activities, it produces non-medical waste. This non-medical waste can come from the office/administration (paper), service units (in the form of cardboard, cans, bottles), waste from the patient's room, food waste, kitchen waste (leftover wrappers, leftovers, foodstuffs, vegetables, etc.). Liquid waste produced by hospitals has physical, chemical, and biological characteristics. Hospital waste can contain various microorganisms, depending on the type of hospital, the level of processing carried out before disposal, and the type of existing facilities (laboratories, clinics, etc.). Of course, of these types of microorganisms, there are pathogenic ones. Hospital waste, like other waste, will contain organic and inorganic materials, whose content levels can be determined by dirty tests in general, such as BOD, COD, TTS, pH, microbiology, and others.

The effect of hospital medical waste on health and the environment.

There are often violations of B3 waste management, including medical waste committed by health care providers. Many still do not meet the applicable regulations' administrative and technical licensing requirements regarding B3 waste management. Improper disposal or landfilling of B3 waste is still found. Temporary Shelters (TPS) of B3 waste are mixed with non-B3 waste. Storage of B3 waste has been carried out for more than 90 days. Storage warehouses that do not match the amount of B3 waste collected are still found. It was even found to have falsified B3 waste documents. This is due to the lack of understanding of implementers about B3 waste management.

The purpose of B3 waste management, which has been regulated in laws and regulations, is to prevent and reduce as much as possible the consequences of the cause of B3 waste so as not to cause pollution and disruption to safety and health. The management efforts include "activities to reduce, store, transport, collect, utilize, process, and landfill B3 waste".

In the Legislation of the Republic of Indonesia No.32 of 2009 to 6), it is stated that "Everyone who produces B3 waste is obliged to manage the B3 waste produced" (article 1), "In the case of expired B3, the management follows the provisions of B3 waste management" (article 2), "If everyone is unable to carry out their own B3 waste management, the management is handed over to other parties" (article 3), "B3 waste management must obtain permission from the Minister, Governor, or Regent / Mayor by their authority" (article 4), "The Minister, Governor, or Regent / Mayor must include environmental requirements that must be met and obligations that must be complied with B3 waste management in the permit" (article 5), "The decision on granting permits must be announced" (article 6).

Based on the article above, it is clear that healthcare providers as waste producers must carry out waste management as required. The legal sanctions are also not minor and severe for those who violate these provisions. This is stated in the law "Law No.32 of 2009". Article 102 states that "B3 waste management without a permit will get a minimum prison sentence of 1 year and a maximum of 3 years and a minimum fine of 1 billion and a maximum of 3 billion". Article 103 states that " B3 waste producers who do not carry out B3 waste management will get a minimum prison sentence of 1 year and a

maximum of 3 years and a minimum fine of 1 billion and a maximum of 3 billion". Article 112 states, "If the authorized official does not supervise, he will be imprisoned without a minimum time, a maximum of 1 year, and a maximum fine of 500 million". Article 105 deals with waste import with a criminal law of "a minimum of 4 years and a maximum of 12 years and a fine of at least 4 billion and a maximum of 12 billion". If what is imported is B3 waste, the legal sanctions will be more severe, namely "imprisonment of at least five years and a maximum of 15 years and fines of at least 5 billion and a maximum of 15 billion" by Article 106. Waste dumping activities are unjustified, for violators will be subject to a maximum prison sentence of 3 years and a maximum fine of 3 billion. Therefore, efforts to manage B3 waste must be considered considering the impact that can be caused and the expensive legal sanctions if violations are made.

Hospital medical waste management mechanism

In principle, hospital waste management is part of hospital environmental health activities, which aims to protect the community from the potential dangers of environmental pollution sourced from hospital waste.

Selection of Hospital Wastewater Treatment Technology

1. Wastewater treatment with active limpur process.

Wastewater treatment with an activated sludge process generally consists of initial settling basins, aeration baths, final settling basins, and chlorination baths to kill pathogenic bacteria; generally, the treatment process is as follows. Wastewater from hospitals is collected into wastewater reservoirs, which function as wastewater discharge control basins and are equipped with coarse filters for large impurities. Then, the wastewater in the reservoir is pumped into the initial settling basin. The initial settling bath degrades suspended solids by about 30-40%. In addition to BOD, gravity flows about 25% of runoff water from the initial settling basin into the aeration basin. In this aeration basin, wastewater is exhaled with air so that existing microorganisms will decompose organic substances. In wastewater, the energy obtained from the decomposition of organic substances is used by microorganisms for the growth process. Thus, the aeration basin will grow and develop biomass in large quantities; this biomass or microorganisms will decompose pollutant compounds in wastewater.

Water flows into the final settling basin from the aeration basin; in this bath, activated sludge containing a mass of micro-organisms is deposited and pumped back to the inlet of the aeration bath with the lead of sludge circulation. Overflow water from the settling basin is eventually drained into the chlorination basin. In this chlorine contractor basin, wastewater is contaminated with chlorine compounds to kill pathogenic microorganisms. Treated water, which comes out after chlorination, can be directly discharged into rivers or public channels. With this process, hospital wastewater with a BOD concentration of 250-300 mg / lt can be reduced to 20-30 mg / lt. Surplus sludge from the initial and final settling basin is collected into the sludge drying basin, while the infiltration water is collected again in the wastewater reservoir. The advantage of this activated sludge process is that it can treat wastewater with a huge BOD load. It does not require a prominent place. This process is suitable for treating large amounts of

wastewater. Some of the disadvantages include the possibility of bulking in the mud produced, which is quite large.

The provision that hospitals must own to reduce environmental pollution is incinerators. The tool is used to burn solid waste in the form of waste remnants of human organs that should not be thrown away.

Hospital waste, especially infectious medical waste, must be appropriately managed, but until now, most infectious waste management has been equated with non-infectious medical waste. In addition, it is often mixed with medical and non-medical waste. The mixing magnifies the problem of medical waste. However, medical waste requires exceptional management that is different from non-medical waste.

Medical waste is infectious waste, radiological waste, cytotoxic waste, and laboratory waste. In most hospitals, medical waste is directly disposed of in a large disposal tank because such disposal tanks in Indonesia mostly do not qualify as waste disposal sites.

2. Legal Basis of Waste Management

As we know the negative impact of environmental health, a health service facility such as a hospital can also be a source of environmental problems. This condition is mainly if the waste produced due to healthcare activities is not managed correctly. Hospitals, in carrying out their operational functions, produce waste, be it domestic waste, solid waste, liquid waste, gaseous waste, or radioactive waste.

The above conditions are caused by various activities in hospitals that have the potential to produce various characteristics and types of waste and have the potential to produce impacts classified as waste containing Toxic Hazardous Materials (B3), which are harmful to human life, such as the disposal of injection jars scars, infusion jars marks, which can be vectors carrying disease seeds.

Hospital environmental management is now no longer a partially consumptive part. However, it is a series of cycles and strategies of Hospital management to develop the capacity of Hospital environmental management to provide direct and indirect benefits to improve the quality of Hospital services. Hospital environmental management has complex problems. One of them is the problem of hospital waste, which is very sensitive to government regulations. The Hospital, as one of the largest waste producers, has the potential to cause pollution to the surrounding environment, which will harm the community and even the Hospital itself.

In the context of medical waste management or hospitals, it is based on the fact that the Indonesian state is a state of law where the joints of life rely on applicable law. Various laws and regulations as the basis of human health related to environmental health programs, especially in terms of hospital medical competition management, refer to the provisions of Law Number 36 of 2009 concerning health.

Administrative Environmental Law Supervision

Environmental problems cause adverse impacts in the form of threats to human health, ecological and economic losses, environmental and health losses due to pollution,

and environmental damage can be irreversible. Therefore, environmental management should be based more on prevention than recovery. About efforts to prevent the emergence of environmental problems as part of environmental management, environmental law has an essential function because one of the fields of environmental law, namely administrative environmental law, has a preventive function and a corrective function for activities that do not meet the provisions or requirements of environmental management—manifested in the form of supervision carried out by the competent officer in the field of environmental supervision, if, based on the environmental supervision function, a violation of the provisions of the administrative environmental law, the authorized official can impose administrative, legal sanctions on the violator. Therefore, in this section, legal provisions relating to supervisory activities are first discussed.

Freezing of permits and revocation of environmental permits.

The Environmental Law of 1997 does not recognize administrative sanctions in the form of freezing permits, while Law Number 32 of 2009 concerning Environmental Protection and Management regulates the existence of sanctions for freezing environmental permits as regulated in Article 76 paragraph (2) c, Environmental Law of 1997 and Law Number 32 of 2009 concerning Environmental Protection and Management recognizes administrative law in the form of license revocation. The environment is referred to in Article 76 paragraph (2), sanctions for freezing environmental permits and revoking environmental permits are the last efforts in administrative law enforcement after the person in charge of the business does not carry out government coercion.

Environmental law enforcement through state administration lawsuits.

Administrative and legal sanctions in the form of government coercion, fines, license freezes, and license revocations are carried out by state administrative officials against administrative law violators without going through a judicial process. Problems will arise if administrative environmental laws are violated, but the competent state administrative official does not exercise authority to impose administrative sanctions on the violator. In other words, state administrative officials who are authorized to silence the occurrence of violations of administrative laws or even Dima only stipulate activities that violate administrative environmental law. For example, in a business activity plan - according to the provisions of environmental law, the administration is obliged to conduct an environmental impact analysis (Amdal). However, the activity has been established or operated through the AMDAL process, and the authorized official still issues a business license. In that situation, who should act to enforce administrative environmental laws?

Aspects of criminal law in B3 waste management in Indonesia.

Provisions related to the management of b3 waste are stipulated in Article 1 number 22, article 59, article 69 of Law no 32 of 2009 concerning environmental protection and management, and PP no 18 of 1999 concerning hazardous and toxic waste management. Government Regulation No. 85 of 1999 concerning Amendments to Government Regulation No. 18/1999 concerning Hazardous and Toxic Waste Management, as well as Regulation of the State Minister of Environment No. 30 of 2009 concerning Licensing

and Supervision of Hazardous and Toxic Waste Management and Supervision of Recovery Due to Hazardous and Toxic Waste Pollution by Local Governments.

Conclusion

Based on research on B3 waste in the field of environment and its impact on health, it can be concluded that clinical waste from hospital-supporting activities produces non-medical waste, including from offices/administration, service units (cartons, cans, bottles), patient rooms, food waste, and kitchen waste. Hospital liquid waste has physical, chemical, and biological characteristics, potentially containing microorganisms, including pathogenic ones. Hospital waste content, both organic and inorganic, can be identified through dirty tests such as BOD, COD, TTS, pH, and microbiological. In addition, the participation of the board in corporate accountability is considered necessary, as it is related to the corporation's status as a legal subject. This involvement allows the element of guilt or the inner intention of the perpetrator to be proved, as well as ensuring compliance with applicable regulations. In the implementation of emergency hospitals, the obligation of corporate management to comply with regulations is regulated in law, with criminal threats including imprisonment and fines by Law of the Republic of Indonesia Number 18 of 2008 concerning Waste Management and Law of the Republic of Indonesia Number 32 of 2009 concerning Environmental Protection and Management.

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