Deviation of Management of Medical Waste from Hospital Implication upon Environmental Damage in West Sumatera, Indonesia

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Abstract: The purpose of this study is to show and analyze suspected abuse of power by hospital administrators in North Sumatra with public officials, in this case the bureaucrats in the Ministry of Environment of West Sumatra Region, carrying out hazardous medical waste out of place according to environmental science regulations, so that it occurs environmental damage. This research approach method is a qualitative method. Creswell defines a qualitative method as a research method that is based on the perspective of constructivism, namely various meanings, meanings that are socially and historically constructed with a view to developing a theory or pattern. Researchers collect data that is opened and developing, with the aim of developing a theme from the data obtained. The data collection technique is carried out by literature study of primary and secondary and tertiary legal materials. Environmental regulation analysis techniques, with analysis using the theory of abuse of power. So that researchers draw conclusions deductively, and provide recommendations or suggestions according to research objectives. The results found here were that the actors of the management of hospital medical waste disposal were not in accordance with hospital regulations and environmental regulations. Suggestions are provided by researchers for environmental crime prevention in an effort to prevent and tackle environmental destruction.

Keywords: Regulatory Deviation, Medical Waste, Hospital, Abuse of Power, Environmental Damage.

1. INTRODUCTION

Hospitals are health care units for individuals, families, and communities with the core of medical services, both in terms of preventive, curative, rehabilitative and promoted processes that are processed in an integrated manner to achieve optimal health services. Hospitals in Indonesia according to Indonesia’s health profile from 2013 -2016 were increasing every year. In 2014, there were 2,406 hospitals in Indonesia, increased to 2,776 in 2017 consisting of 2,198 General Hospitals and 578 Special Hospital. As the number of hospitals increased, the amount of production of medical waste produced will also increase. Hospital waste the potential to pollute the environment and can cause workplace accidents and disease transmission if hospital medical waste is not managed1. Healthcare waste management is the responsibility of health workers in hospitals.2

Hospitals and healthcare centers are among the leading sources of infectious and non-infectious waste in any countries. They provide patient care services, and it is their duty to look after public health and make sure that medical waste is treated and disposed in proper ways directly through patient care or indirectly by ensuring a clean, healthy environment for their employees and the communities.3

1Herina Pratiwi (2019), Hospital Medical Waste Management Model Based On South Sulawesi Province, European Journal of Advanced Research in Biological and Life Sciences, Vol.7 No. 1 Page 18.
Despite the attention given to medical waste by the public and all levels of government, the terms of hospital waste, medical waste, regulated medical waste," and "infectious waste" remain poorly defined. There is no universally standard accepted definition for these terms, and there appear to be as many definitions in use as there are government agencies and other groups involved in this issue. Given the diversity of interest and scientific credentials of persons, groups, and agencies involved in the medical waste issue, these differences are not surprising.

It comes mostly from the administrative and housekeeping functions of health-care establishments and may also include waste generated during maintenance of health-care premises. The remaining 10-25 percent of healthcare waste is regarded as hazardous and may create a variety of health risks. Preventing the formation of medical waste gives a significant contribution to the reduction of waste management expenses in healthcare. The cost to handle and dispose of medical waste is indeed substantially more than solid waste handling. This makes efforts to reduce the commingling of these wastes a worthwhile task.

The bio-medical waste, by its definition, includes solids or fluids, its containers, and any intermediate products generated during diagnosis, treatment, or immunization, in research pertaining thereto or in the production of testing of biological and animal waste. Hospital waste generated from different units of the hospital can cause serious health hazards like the spread of HIV infection, Hepatitis B and C, etc. According to WHO, around 85% of the hospital's waste is non-hazardous, 10% infective, and the remaining 5% is non-infective but hazardous.\(^4\) Medical waste refers to any waste generated from the health care industry such as hospitals and medical laboratories. It includes anatomical waste, pathological waste, infectious waste, hazardous waste, and other waste. Because of the recent AIDS (Acquired Immune Deficiency Syndrome) dilemma and that posed by other communicable diseases such as hepatitis B, the public is increasingly concerned over the handling of medical waste.\(^5\)

### 2. REVIEW OF REGULATIONS

In Law Number 36 of 2009 on Health in Article 163 on Environmental Health, it is stated that: Environmental health efforts are aimed at creating a healthy environmental quality, be it physical, chemical, biological, or social which enables everyone to achieve the highest degree of health.\(^6\) Based on Article of the Regulation of the Minister of Health of the Republic of Indonesia Number 7 of 2019 on Hospital Health (RMH No. 7 of 2019), it is stated that in Article 1, the hospital environmental health aims to a. realizing a healthy environmental quality for the hospital from physical, chemical, biological, radioactivity and social aspects; b. protecting hospital human resources, patients, visitors and the community around the hospital from environmental risk factors; and c. creating an environmentally friendly hospital.\(^7\)

Based on Article 12 of RMH No .7 of 2019:

1. Guidance and supervision of the administration of hospital environmental health shall be carried out by the Minister, the head of the provincial regional health service, and the head of the district/city regional health service, as well as related institutions in accordance with their respective authorities

2. In implementing the guidance and supervision as referred to in paragraph (1), related organizations or associations may be involved.

3. The guidance and supervision as meant in paragraph (1) shall be carried out through: a. advocacy and outreach; b. technical guidance; and c. monitoring and evaluation.

4. In the framework of fostering and supervising the health of the hospital environment as referred to in paragraph (1), the Minister, the head of provincial regional health service, the head of district/city regional health service according to their respective authority may impose administrative sanctions in the form of an oral warning or a written warning to a hospital that does not organize a health hospital environment.\(^8\)

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\(^3\)Republic of Indonesia Law Number 36 on Health.

\(^4\)Regulation of the Minister of Health of the Republic of Indonesia Number 7 of 2019 on Hospital Health.

\(^5\)Regulation of the Minister of Health of the Republic of Indonesia Number 7 of 2019 on Hospital Health.
Law of the Republic of Indonesia Number 32 of 2009 on Protection and Management of the Environment, in Article 69 it is stated that: Every person is prohibited from committing an act that causes environmental pollution and/ or damage; importing hazardous and toxic materials (HTM) which are prohibited by law and regulation into the territory of the Republic of Indonesia; importing HTM waste into the territory of the Republic of Indonesia; disposing of waste to environmental media; disposing of HTM and HTM waste to environmental media; releasing genetically engineered products into environmental media that are contrary to statutory regulations or environmental permits; clearing land by burning; preparing Environmental Impact Analysis (AMDAL) without having a certificate of competence for AMDAL drafting and/ or provide false, misleading, misleading information, destroying information, or providing false information.9

Article 88: Every person whose actions, business, and/ or activities use HTM, produce and/ or manage HTM waste, and/ or who pose a serious threat to the environment are absolutely responsible for the losses incurred without the need to prove the element of error. Whereas in Article 58 it is stated that: Every person who enters the territory of the Unitary State of the Republic of Indonesia, produces, transports, distributes, stores, uses, disposes, processes and/ or stores Hazardous and Toxic Material (B3) is obliged to carry out HTM management.

Of Law Number 18 of 2008 on Waste Management, in article 22 on Management, Waste Management it is stated that: Sorting the waste is in the form of grouping and separating waste according to the type, amount, and/ or nature of the waste. Temporary shelter or integrated waste processing site Transportation is in the form of carrying waste from the source and/ or from the temporary garbage collection site or from the integrated waste processing site to the final processing site. Processing is in the form of changing the characteristics, composition and amount of waste. Final waste processing is in the form of returning waste and/ or residue from previous processing to environmental media safely.10 Deviation in the management of medical waste disposal from hospitals that do not meet the regulations for hospital workers and management who neglect the rules will be subject to individual or corporate criminal sanctions.

As stipulated in Article 40 of Law of the Republic of Indonesia Number 18 of 2008 on Waste Management, it is stated that waste managers who violate the law and deliberately carry out waste management activities without paying attention to norms, standards, procedures, or criteria that can cause public health problems, disturbances security, environmental pollution and/ or environmental destruction is punishable by imprisonment for a minimum of 4 (four) years and a maximum of 10 (ten) years and a fine of at least Rp. 100,000,000.00 (one hundred million rupiah) and a maximum of Rp. 5,000,000,000.00 (five billion rupiah).11

Likewise, as stipulated in the Law of the Republic of Indonesia Number 18 of 2008 on Waste Management. In Article 41 paragraph it is stated that (1) Waste managers who due to their negligence carry out waste management activities without paying attention to the norms, standards, procedures or criteria that can cause public health problems, security problems, environmental pollution, and/ or environmental destruction shall be punished with imprisonment at the longest 3 (three) years and a maximum fine of Rp. 100,000,000.00 (one hundred million rupiah). In paragraph (2), it is stated that If the criminal act as referred to in paragraph (1) results in a death or serious injury to a person, the waste manager is threatened with imprisonment of 5 (five) years and a maximum fine of Rp. 500,000,000.00 (five hundred million rupiah).12

3. RESEARCH METHODS

This research was descriptive, carried out with the regulatory approach for the management of medical waste from hospitals in West Sumatra Province. Types and sources of data used were secondary data. Data collection was carried out primarily by means of document study techniques (library research and online research), by means of inventorying the secondary data required, either in the form of primary research materials, that were applicable environmental regulations in West Sumatera, Province Indonesia.

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10Law of the Republic of Indonesia Number 18 of 2008 on Waste Management.
12Law of the Republic of Indonesia Number 18 of 2008 on Waste Management.
The research material was in the form of data stating that there was a deviation from primary data, as well as tertiary research data, then it was performed historical data tracing and synchronization between the primary research materials. The primary research materials consisted of laws and regulations, especially those related to environmental protection and management. Secondary, research materials included: scientific papers, research results and literature related to research substance. Tertiary research materials were, namely materials supporting primary and secondary research material information, including data from online media, dictionaries, encyclopedias. The research location of medical waste disposal area was from hospitals in West Sumatra Province, Indonesia.

The data processing method used to trace historical data The document method referred to in this research is books, previous research in the form of a dissertation, thesis, national and international scientific journals, mass media news whose data is not reliable and valid, which is directly related to research in this study.

Analysis Technique. According to Bogdan and Biklen in Lexy J. Moleong, data analysis is an effort made by using data, organizing data, sorting it into manageable units, synthesizing it, looking for and finding patterns, finding what is important and what is done and deciding what What can be implemented to other people The steps in data analysis techniques in this study are: 1) Data reduction begins with selecting documents according to the substance of the research, focused on substances that are relevant to the content of the data obtained so that the data that has been reduced can provide a sharper picture of the substance of this research. In this data reduction process, researchers can make choices about which data can be coded, which ones are discarded, which are summaries, what stories are developing. Data reduction is a form of analysis that sharpens, classifies, directs, discards unnecessary and organizes data in a way that can actually be retrieved and reported.

Data display is the process of displaying data simply in the form of words, narrative sentences with the intention that the data that has been mastered by the researcher is the basis for drawing correct conclusions. Verification and Conclusion. Since the beginning of the data processing research, the researcher made tentative conclusions. In the final stage, these conclusions are checked again (report) on the notes that have been made by the researcher and then lead to complete conclusions. Conclusion withdrawal can be initiated with conclusions that still need to be refined. After continuous processing of data, reports and reports about the correctness and validation, finally it can be known and clearer. Conclusions are the essence of research findings that describe the opinions of researchers, the last is based on previous descriptions. Final conclusions that are relevant to the substance of the research, the formulation of the problem, the objectives of the research and the findings of the research which are carried out in a thorough discussion.

4. DISCUSSION

According to the Governor of West Sumatra Province, Irwan Prayitno, he said that now West Sumatra is facing the problem of Hazardous and Toxic Waste (HTW) from health facilities that annually records 1,899.15 tons of medical waste from 2,839 existing hospital facilities. Medical waste originating from health care facilities is a problem that has occurred for a long time. It is very sad that the hospital cannot do disposal of medical waste, for the disposal of medical waste that has just piled up in the hospital. Hospitals or other health facilities may not dispose medical waste carelessly. There have been many cases of hospitals in the district that have been hit by criminal law problems because they were caught littering. The capacity for medical waste treatment carried out by all private parties and all hospitals with licensed incinerators is still not comparable to the waste generated, so there is still a lot of untreated medical waste.

Andalas University researchers reveal that the number of medical hazardous waste piles in West Sumatra will continue to increase every year, with a prediction of reaching 8,445 tons per year in 2040 or 23.1 tons per day. Currently, the city of Padang was still the largest producer of medical waste in West Sumatra, with total production reaching 863.73 tonnes in 2018, following Bukit tinggi with 417.31 tonnes and Payakumbuh as many as 106.23 tonnes. The least amount of MHW medical waste in the Mentawai Islands was 3.86 tons. This is due to the absence of a hospital on the island. Meanwhile, the waste from Sawah lunto City is also relatively small, namely 7.22 tons per year.
In this case, the hospital as a health facility must also pay attention to this link. On the other hand, hospitals can also be said to be donors of waste because the waste comes from medical and non-medical activities that are dangerous and toxic.

Based on the Decree of the Minister of Health Number 1204 of 2004 on Hospital Environmental Health Requirements, medical waste is all waste generated from medical activities in the form of solid, liquid and gas. Solid medical waste is solid waste consisting of infectious waste, pathological waste, sharps waste, pharmaceutical waste, toxic waste, chemical waste, radioactive waste, pressurized container waste, and waste with high heavy metal content. Meanwhile, good hospital waste management is based on WHO criteria, namely if the percentage of medical waste is 15%, but in Indonesia it reaches 23.3%. In Indonesia’s health profile, it is stated that the average waste production in the form of domestic waste is 76.8%, infectious waste is 23.2%. It is estimated that nationally the production of hospital waste is 376,089 tons per day.

From the results of research on the analysis on the solid medical waste management system for Lubuk Sikaping public hospital, it was stated that the policy of the Lubuk Sikaping area public hospital was not well socialized. Based on the theory, it is stated that one of the efforts to manage hospital waste can be implemented by preparing regulations, guidelines, and policies that regulate the management and improvement of health in the hospital environment. It is better if the hospital must socialize the existing regulations in the hospital to hospital staff.

Medical waste management staff still do not really supervise the process of medical waste management, the availability of qualified and experienced management personnel is needed to carry out medical waste management activities. It should be necessary to add and adjust solid medical waste management personnel in the hospital to their function. No special funds were found for medical waste management. The availability of sufficient funds really supports the implementation of medical and non-medical waste management activities produced by the hospital. Extermination of medical waste is imperfect because the incinerator temperature does not reach 10000C. The temperature of burning medical waste should be up to 10000C. The conclusion of this study is that the application of medical waste management in the Lubuk Sikaping area public hospital is still not fully implemented. The implementation of policies has not been fully implemented, as well as facilities and infrastructure that have not been functioning optimally. The processes of sorting, transporting and destroying medical waste have not met the requirements.

The Regent of Pesisir Selatan, West Sumatra, Hendrajoni encourages the investigation of cases of medical waste in the form of syringes, intravenous fluids and used infusion tubes that contaminated Tan Sridano Beach related to waste disposal. It was suspected that the medical waste was the result of crimes related to drug abuse because the number reached hundreds. The case was the negligence of hospitals around Pesisir Selatan District and its surroundings, West Sumatra Province. However, he said, when cleaning the beach, a plastic bag branded Siti Rahmah Islamic Hospital was found at Jalan Raya By Pass KM 15, Padang City and the plastic bag had been handed over to the local police.

Based on the volume, waste can come from medical, nursing, dentistry, veterinary activities, drug manufacturing or training, treatment, research, processing, teaching and research activities as well as from blood collection activities through transfusion. These activities can put a big risk of disease transmission. There is a need for the proper and safe

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management of solid medical waste. The handling of solid medical waste must be immediately addressed to ensure the health and safety of workers and other people in the hospital environment. Based on the facts above, it is suspected that there is a lack of supervision from the Ministry of the Environment for the disposal of hazardous toxic hospital waste for the surrounding community. In this case, it is suspected that there was a conspiracy between the hospital management and the West Sumatra government bureaucrats. Researchers in this case suspected that it had occurred abuse of power by bureaucrats from the health and environmental services.

It was against the law when there was agreement or cooperation between State Administrators or between State Administrators and other parties that harm other people, the community, and the state. While Article 1 (5) of Law no. 28/1999 defines nepotism as an act of the conduct of a State Operator in an unlawful manner that benefits the interests of his family and/ or cronies over the interests of the community, nation, and state. In the case of the Lubuk Sikaping public hospital, it was suspected that the evil agreement between hospital administrators and bureaucrats in the health and environmental services for medical waste management was not in accordance with the rules, therefore, it could be said to have committed collusion.

Next, Dr. Hospital Sadikin of Pariaman City was started as a Community Health Center (puskesmas) for care which stood on Jalan Simpang Nostalgia, Desa Kampung Gadang Padusunan, and started changing its name on December 24, 2016 along with the inauguration of Dr. Sadikin by the Pariaman City Government through the Decree of the Mayor of Pariaman Number 468/441/2016 on the Determination of Kampung Baru Padusunan Puskesmas (Community Health Center) to be the General Hospital of Kota Pariaman with a land area of ± 6000 M2 and a building area of +1500 M2 with 20 beds consisting of Child Care Rooms 5 beds, 5 bed Midwifery Room and 5 Internal Medicine Room with a staff consisting of 4 General Practitioners and 26 Paramedics. Regional General Hospital of Dr. Sadikin Pariaman City is technically under the Kota Pariaman Health Office.

Dr. Sadikin Hospital Pariaman was confirmed as a health referral center in Pariaman City. Dr. Sadikin Pariaman City must improve itself to broaden its horizons so that it can carry out its main functions and tasks properly. One of the promotional efforts is to promote the existence of Dr. Sadikin Hospital of Pariaman City and its coaching programs that have been and will be implemented. With the increasing activities and demands of the community’s needs for health services, the construction and renovation of the Specialistic polygroup building and renovation of the patient waiting room has been initiated in order to provide excellent, comfortable service to visitors of Dr. Sadikin Hospital of Pariaman City.

Based on the Decree of the Head of the One Stop Investment Service and Manpower of Pariaman City Number 001/SIO/KEP/ DPM, PTSP & NAKER -2017 on Hospital Operational Permits, Dr. Sadikin Hospital of Pariaman City became Class D and then accompanied by the formation of Dr. Sadikin Hospital of Pariaman City through Mayor Pariaman Regulation Number 65 of 2016 on the Establishment of the Organizational Structure for the Technical Implementation Unit of the General Hospital of Dr. Sadikin Pariaman City, West Sumatra.

From the results of direct observation to the general hospital of Dr. Sadikin some time ago, it was received information that the Environmental Permit did not exist yet. In terms of environmental audits, this environmental permit is vital for further operational activities. Furthermore, there were no planning documents and other permits and did not have a hazardous waste management permit, nor had they been implemented properly. In this case, it was suspected that there had been a violation of regulations committed by the hospital management with

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bureaucrats from the health and environmental services, Pariaman, West Sumatra. There was no permit for the management of waste from the general hospital in the Pariaman area, but the hospital had been running. Researchers suspected that there had been collusion and nepotism between the bureaucrats in the health service, the environmental service and the hospital, and a conflict of interest was suspected.

A conflict of interest contains three important elements, namely economic, financial interests of individuals and groups, this can occur in other types of interests, for example, guaranteeing benefits for family members. Basically, there is nothing wrong with pursuing personal interests. Problems arise when this personal interest conflicts with the prosecutor as a public duty/responsibility. In this case, the management of the general hospital in the Pariaman, West Sumatera area was suspected of violating the regulations for hospital waste management, and the bureaucrats from the health service and the environmental service of the Pariaman Sumatera Barat area were suspected of abusing power for the hospital to operate even without a medical waste management permit.

Abuse of power by persons who are situated in high places is where they have the opportunity for such abuse. White-collar crime does not refer to the social positions of offenders but rather to the context in which white-collar crimes are carried out or to the methods used in their commission that white-collar violations are those violations of law to which penalties are attached that involve the use of a violator's position of significant power, influence, or trust in the legitimate economic or political-institutional order for the purpose of illegal gain, or to commit an illegal act for personal or organizational gain. Of the health and environmental services which have the authority in the operation of the general hospital in the Pariaman of West Sumatera, in managing medical waste disposal, it was possible that nepotism had occurred, collusion accepted bribes from the hospital management.

Regarding the legal implications of abuse of power to the administration of public officials that harm state finances, administrative law is known as the term of authority, which is aligned with the term "bevoegdheid". The difference between authority and the term of bevoegdheid is that they are used both in the concept of public law and private law, whereas in Indonesia it is always used in the concept of public law, in which, the use of authority is intended to control the behavior of legal subjects. Authority must have the legitimacy and conformity of the law, containing interpretation of authority standards. In the case of irregularities in the management of medical waste disposal in general hospital of Dr. Sadikin, Pariaman, West Sumatra, the health and environmental services as an extension of the central power, were suspected of committing nepotism, collusion and even accepting bribes, because they gave the hospital a license to operate without a permit in accordance with environmental regulations.

At the General Hospital of West Sumatra Province, in carrying out its function, the hospital uses various materials and facilities or equipment that can contain hazardous and toxic materials. Hospital interactions with humans and the environment in the hospital can cause environmental health problems which are indicated by indicators of decreasing quality of environmental health media in the hospital, such as water, air, food, facilities and buildings as well as vectors and animals carrying disease. As a result, the quality of the hospital environment does not meet the standard environmental health quality standards and health requirements that have been determined.

Based on Article 12 paragraph (1) Regulation of the Minister of Health of the Republic of Indonesia Number 7 of 2019 on Hospital Health, it is stated that the guidance and supervision of the implementation of hospital environmental health is carried out by the Minister, the head of the provincial regional health service, and the head of the district/ city regional health service, as well as institutions. In accordance with their respective authorities. The main problem for researchers is that the bureaucrats in the government of West Sumatra Province do not carry out a supervisory function, which is an indication of a conspiracy of environmental crimes. The case that the management of hospital medical waste disposal is not

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20Regulation of the Minister of Health of the Republic of Indonesia Number 7 of 2019 on Hospital Health.
in accordance with the regulations has implications for environmental damage, especially health disasters, even worsening the death of the surrounding community.

5. CONCLUSION

Environmental damage resulted from the deviation of the implementation of medical waste from the hospital is because hospital managers and bureaucrats from the health service, environmental service, and other state institutions are suspected of committing nepotism and collusion, an organized crime by way of nationalizing deviations from Law No. 23/1997 on the Environment. Therefore, the researchers based on a case study of hospital waste disposal irregularities in West Sumatra Province, it is suspected that there has been an environmental crime conspiracy. The bureaucrats commit nepotism, collude with hospital administrators so that they abuse power, then continue to bribe to give hospital operations permits without permits according to environmental regulations, neither does it run article 12 paragraph (1) Regulation of the Minister of Health of the Republic of Indonesia Number 7 of 2019 on Hospital Health. Health is the guidance and supervision of the implementation of hospital environmental health carried out by the Minister, the head of the provincial regional health service, and the head of the district / city regional health service, as well as institutions, in accordance with their respective authorities.

It is indeed a long-running effort that initiators and perpetrators of environmental crime prevention have to face in their efforts to prevent and overcome environmental destruction or also known as environmental crime. There are several conditional factors that make it difficult for environmental destruction to be overcome, including: First, environmental destruction is difficult to know. This is different from conventional crimes, where the victim quickly realizes that he has become a victim of a crime such as theft, robbery, rape, and so on. This is not the case with environmental destruction. They are not easily recognized by ordinary people even though law enforcers do not understand environmental science, also that environmental destruction does not automatically show its negative impacts. Second, there is a difficulty in investigating and prosecuting. This is mainly because of the perpetrators of environmental crimes, most of them are a class of respectable people and are smart people. They are often referred to as “the skilled criminals.” Due to their cleverness, they tend to have the ability to avoid investigation and prosecution. As such, investigating and prosecuting this type of crime will require high time and costs of investigation and prosecution. Also related to this problem, gathering the necessary evidence will be difficult.

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