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# COMPLIANCE IN MEDICAL WASTE MANAGEMENT DURING THE COVID-19 PANDEMIC AT PRIVATE DENTAL CLINIC, JAKARTA

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**ABSTRACT:**
Waste management is part of environmental health activities that aim to protect the community from the dangers of environmental pollution sourced from health waste. To avoid these risks, waste management in health service facilities is needed. Purpose: To get an overview of dental assistant compliance in medical waste management during the COVID-19 pandemic at private dental clinics in South Jakarta in 2022. Method: This research is a descriptive study. with a sample of 30 private dental clinics in South Jakarta. The sample determination technique used in this study is a random sampling technique. Results: The results of the study show that private dental clinics in the South Jakarta area that have SOPs but are not perfect are 24 clinics (80.0%), which have SOP's there were 6 clinics (20.0%) and 16 respondents were compliant (53.3%) in medical waste management, and 14 respondents were non- compliant (46.7%) in medical waste management. Conclusion: Most private dental clinics in South Jakarta have SOP's, but they are not perfect. However, most dental assistants are obedient in the management of medical waste.

**Keywords:** Compliance, Dental Assistant, Medical Waste

## INTRODUCTION

In Law Number 36 of 2009 concerning Health Article 163 in paragraph (1) it is said that the government, regional governments and communities guarantee the availability of a healthy environment and do not have bad risks to health (Abbott & Reichman, 2007). Environmental problems are closely related to health. To achieve the condition of a healthy society, it is necessary to have a good environment. In this case, health service facilities must also pay attention to this linkage (Amelia et al., 2020). Dentist practice is also one of the health service facilities that also generates medical waste. The amount of medical waste continues to increase along with the increasing number of health service facilities, as well as the waste of dental health service facilities (Aitsi-Selmi et al., 2015). Based on research in Mumbai, the average dental clinic waste generated is around 0.5-1.0 kg per day. Every year dentistry practices in the world produce 4.8 million lead foils, 2.8 million liters of toxic x-ray fixers, 3.7 tons of mercury waste, 1.7 million sterilizers, 680 million chair barriers, light handle covers and patient bibs (Baghele et al., 2013).

Waste management is part of environmental sanitation activities that aim to protect the community from the dangers of environmental pollution originating from health waste. However, it is very unfortunate that there are still many managers of health care facilities who pay little attention to the proper management and disposal of their waste, even though this is very detrimental to the community. This allows for environmental pollution and health problems, also produces waste that can transmit disease. To avoid this risk, it is necessary to manage waste in health care facilities (Rosihan, 2018).

The world health organization (WHO) has released that 40 percent of cases of death of hepatitis and HIV/AIDS patients in various countries are due to poor management of medical waste from hospitals (WHO, 2018) (Singh et al., 2022). Or practicing doctors who run health service facilities Based on Government Regulation No. 101 of 2014, everyone who produces B3 waste is required to manage the B3 waste they produce (Crush & Tawodzera, 2014). In addition, in the appendix it is explained that the waste generated from the activities of health service facilities is classified as B3 waste from specific sources. Management of B3 waste in dental clinics needs to be managed in accordance with applicable regulations (Adedigba et al., 2010). so that environmental management in dental clinics can be carried out in a systematic and sustainable manner. Environmental management of the dental clinic aims to reduce waste in the form of waste from these activities, besides that proper management of B3 waste is useful as a clear waste product from these activities so that it does not pollute the environment. If the environment is

polluted, the survival of living things around the activity will be disrupted and can even cause death

The increase in the number of dental and oral clinics in Indonesia is directly proportional to the amount of medical waste produced. Waste from dental and oral care activities produces medical and non-medical waste (Alhamda et al., 2020). Medical waste is waste originating from medical service activities such as used bandages, leftover body tissue, used syringes, blood bags and others that are categorized as infectious Hazardous and Toxic Materials (B3) waste which should not be mixed with other B3 medical waste, because have different management methods and storage limits. While non-medical waste is domestic waste generated from health care facilities such as paper, plastic, plastic bottles, cans, food scraps, leaves, other organic and inorganic materials, for non-medical waste some of it can be recycled or disposed of directly to the Final Processing Site (Blambangan, 2013).

In some developing countries, such as Indonesia, medical waste has not received sufficient attention, most medical waste is still handled and disposed of together with non-medical waste or by using small-scale incinerators to handle medical waste. The management of medical B3 waste originating from health services such as hospitals, health centers, medical centers and medical laboratories in Indonesia is still below professional standards. In fact, many health services dispose of and process medical B3 waste not in accordance with established regulations (Leonita, 2014).

Strict supervision and in accordance with established regulations is important to do. Especially when there is a Covid-19 pandemic like this, further research is needed to find out how solid medical waste is managed during a pandemic. Management of medical waste during the Covid-19 Pandemic must be part of disaster management planning (Rahman & Utama, 2020). The purpose of this study is to get an overview of dental assistant compliance in managing medical waste during the Covid-19 pandemic at private dental clinics in South Jakarta in 2022.

## RESEARCH METHODS

The research design is cross sectional with a descriptive approach. The population in this study were dental assistants at private dental clinics in South Jakarta. The number of samples needed is 30 samples with the criteria's: (1) Dental assistants who work in private dental clinics in the South Jakarta area, (2) Dental assistants who are willing to be respondents. The sampling method used is simple random sampling.

## RESULTS AND DISCUSSION

### Implementation of Data Collection

This study uses primary data. Primary data is data taken directly by researchers. Data collection was carried out at a private dental clinic in South Jakarta. Data collection was taken randomly, using the random sampling method, which began on April 5 – May 10, 2022. The data collected in this study was the compliance of dental assistants in managing medical waste during the Covid 19 pandemic at private dental clinics in the South Jakarta area in 2022 with a total sample of 30 dental clinics, the sample criteria for this study were independent dentist practice and joint doctor practice.

After obtaining permission from the dental clinic, the researcher gave informed consent and collected data through direct observation and question and answer using a checklist sheet to the dental nurse on duty. The data collection process was carried out by researchers and assisted by 2 semester VI students of the Jakarta 1 Ministry of Health Polytechnic of the Ministry of Health, Department of Dental Health.

### Research Results

From research conducted on dental assistant compliance in managing medical waste during the Covid 19 pandemic at a private dental clinic in South Jakarta in 2022, There are two things to observe, namely: Existence of Standard Operating Procedures and Compliance with medical waste management.

**A. Existence of Standard Operating Procedures (SOP)**

Existence of SOP for medical waste management during the Covid 19 pandemic at private dental clinics in the South Jakarta area in 2022 which includes 10 items can be seen in table 1 below:

**Table 1**
**Distribution Existence of Standard Operating Procedures for medical waste management**

| Existence of SOP | (n) | (%) |
|---|---|---|
| Not available | 0 | 0 |
| Available but Incomplete | 24 | 80 |
| Complete | 6 | 20 |
| Total | 30 | 100 |

Based on the table above, it is known that private dental clinics in the South Jakarta area have 24 (80.0%) clinics with Incomplete t SOPs, 6 (20.0%) clinics have Complete SOPs.

**B. Medical waste management compliance**

Results from observations of respondents regarding compliance with medical waste management were obtained in the following table 2:

**Table 2**
**Description of Dental Assistant Compliance in Medical Waste Management**

| Compliance | (n) | (%) |
|---|---|---|
| Compliant ( ≥75%) | 16 | 53,3 |
| Non-compliant (≤75%) | 14 | 46,7 |
| Total | 30 | 100 |

**DISCUSSION**

From the results of research conducted on dental assistants at private dental clinics in South Jakarta in 2022, it was found that 24 clinics (80.0%) had SOPs but were not perfect, and 6 clinics (20.0%) had SOPs that were quite perfect. The 24 clinics had SOPs but were not perfect because they did not carry out 2 to 3 SOP items that were already available, including 3 clinics that did not carry out 1 item, namely not providing infectious symbols and labels and information on highly infectious waste, then collecting solid B3 medical waste to TPS B3 waste is not carried out using special transportation equipment for infectious waste and officers do not use PPE. Then 9 clinics did not carry out 2 items, namely among them After use, containers / bins were not disinfected with disinfectants such as 0.5% chlorine, lysol, carbolic acid, etc. Collection of solid medical B3 waste to TPS B3 waste was not carried out using special means of transporting infectious waste and officers not using PPE. Then 12 clinics that did not carry out 3 of them After use, the container / bin is not disinfected with disinfectants such as 0.5% chlorine, lysol, carbolic acid, etc.

The collection of solid medical B3 waste to the B3 Waste TPS is not carried out using special infectious waste transportation equipment and officers do not use PPE and do not provide infectious symbols and labels and information on highly infectious waste.

The results of this study have improved compared to previous regarding knowledge and adherence to the implementation of solid medical waste management. It shows that of the 32 private dental clinics studied, 28 private dental clinics have SOPs for solid medical waste management. while 4 private dental clinics do not have SOP for solid medical waste management (Isandri, 2019). This shows that there has been an increase from previous research, this may be due to the dental clinic conducting an evaluation every year. Dental clinics must have SOPs and must be complied with, because they are standard and serve as a guide for clinics in managing medical waste.

Based on the results of the percentage of adherence to the implementation of medical waste management for dental assistants, namely 16 dental assistants (53.3%) were obedient and 14 dental assistants (46.7%) were non-compliant in medical waste management. The results of this study are very different when compared to research conducted by (Qoyum & Fauziyyah, 2019). regarding knowledge and compliance with the implementation of solid medical waste management, showing that only (12.5%) comply with the implementation of solid medical waste management and (87.5%) disobedience to the implementation of solid medical waste management.

Based on Government Regulation No. 101 of 2014, everyone who produces B3 waste is required to manage the B3 waste they produce (Yurnalisdel & Rahmawan, 2023). Management of B3 waste in dental

clinics needs to be managed in accordance with applicable regulations, so that environmental management in dental clinics can be carried out in a systematic and sustainable manner. Environmental management of the dental clinic aims to reduce waste in the form of waste from these activities, besides that proper management of B3 waste is useful as a clear waste product from these activities so that it does not pollute the environment. If the environment is polluted, the survival of living things around the activity will be disrupted and can even cause death.

Compliance within the scope of health workers means that a health worker has the awareness to be able to understand and using applicable health regulations, maintaining order in health services and enforcing standard precautions (Palingga et al., 2020). A Dental Assistant is someone who works in a dental clinic under the supervision of a dentist and is responsible for a wide range of administration and laboratory functions. As a dental assistant, clinical, administrative, interpersonal and technological skills are needed (Cowperthwait et al., 2015). Dental assistants who direct health by prioritizing efforts to increase health promotion (promotive), and prevention (preventive), management and healing (curative) and recovery (rehabilitative) (Templeton et al., 2015).

## CONCLUSION

Based on the results of research on compliance of dental assistants in managing medical waste during the Covid 19 pandemic at private dental clinics in South Jakarta, it was concluded that most private dental clinics in South Jakarta have SOPs, but they are not perfect. And most dental assistants comply with medical waste management. Suggestions for clinics It is hoped that private dental clinics in South Jakarta can pay attention to the availability of SOPs in accordance with the latest regulations issued by the government, professional organizations and associations of health service providers.

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