

Optimization of Puskesmas Officers in Medical Waste Management in the Health Service Work Area, Padang City, in 2019

Luthfil Hadi Anshari^{1*}, Nizwardi Azkha², Rahmayuda¹

¹*Faculty of Public Health, Andalas University, Padang, Indonesia*

²*Faculty of Pharmacy, Andalas University, Padang, Indonesia*

*Corresponding author. Email: Luthfilhadianshari@gmail.com

ABSTRACT

Community health center (puskesmas) is one of the health service units that in its activities produces medical and non-medical waste in both solid and liquid forms. This type of research is a quantitative study with cross sectional design where the independent variable consists of the knowledge and attitudes of health center staff in managing medical waste. Based on the results obtained there is no relationship with the attitude of officers' actions towards medical waste management, with a p value of 1,000 (p value > 0.005), while the level of knowledge is related to the actions of officers with a p value of 0.002 (p value < 0.005) OR value of 6.865 means 6.86 times the level of knowledge affects the actions of officers in the management of medical waste in Padang city health centers. Less than half of respondents have low knowledge and negative attitudes in managing medical waste, and more than half of respondents have negative actions in managing medical waste. The knowledge of officers has a significant relationship to the actions of officers in managing medical waste, while the attitude of officers has no relationship with actions officer in the management of medical waste in the Padang City health center.

Keywords: *medical waste management, acting officers, Padang city*

1. INTRODUCTION

Community health center (puskesmas) is one of the health service units that in its activities produces medical and non-medical waste in both solid and liquid forms.

The amount of medical waste originating from health facilities is expected to increase even more. The reason is the increasing number of hospitals, health centers, medical centers, and medical laboratories. The Indonesian Health Profile in 2010 stated that the number of hospitals in Indonesia reached 1,632 units. Meanwhile, the number of puskesmas reached 9,005 units.

Waste generated from medical efforts such as health centers, polyclinics and hospitals is a type of waste that is included in the biohazard category, which is a type of waste that is very dangerous to the environment, where there are many discharges of viruses, bacteria and other harmful substances that must be destroyed with road burned in temperatures above 800° C

2. METHOD

This type of research is a mix method, which is quantitative with cross sectional design in which the independent variable consists of the knowledge and attitudes of health center staff in managing medical waste. Whereas qualitative with the aim to get a picture of medical waste management.

The number of samples in this study were 55 puskesmas officers. The technique for selecting puskesmas is by simple random sampling in which 6 puskesmas are selected from a total of 23 puskesmas in Padang. Samples are health center staff in the medical waste producing room.

3. RESULTS AND DISCUSSION

Result

1. Univariate analysis

a. The actions of the officer

Univariate analysis of officers' actions in sorting medical waste in Padang City Health Center in 2019 can be seen in the following table:

Table 1 of Frequency Distribution of Officers' Actions in Sorting Medical Waste in Padang City Health Center in 2019

Officer Actions	f	%
Negative Measures	25	45,5
Positive Measures	30	54,5
Total	55	100,0

Based on the table of the 55 respondents surveyed, it is known that less than half, namely 25 officers (45.5%) who have negative actions in sorting medical waste in Padang City Health Center in 2019.

The officers' unfavorable actions related to closing immediately when the sharps box was filled 2/3 parts do it right so it is not easy to open when in transportation (3.6%) and wearing gloves and masks when handling trash and releasing immediately when not in use and throw in a yellow plastic bag (18.2%), Put a plastic coating on the trash (23.6%).

b. Knowledge

The frequency distribution of respondents' knowledge in sorting medical waste in Padang City Health Center in 2019 can be seen in the following table:

Table 2 of Frequency Distribution of Respondents' Knowledge in Sorting Medical Waste in Padang City Health Center in 2019

Knowledge	f	%
Low	21	38,2
Height	34	61,8
Total	55	100,0

The table shows that of the 55 respondents surveyed less than half, namely 21 officers (38.2%) who have low knowledge in sorting medical waste in Padang City Health Center in 2019.

The staff's knowledge is lacking about who is responsible for sorting medical waste in the room (69.1%), criteria for waste that must be transported from each room (29.1%), handling if expired drugs are found at the patient's medication facility in the room (10.9%), handsocons and masks that nurses had used when examining patients in the treatment room, were placed in the trash bin (20.0%) and the stages of medical waste management were inappropriate (47.3%).

c. Attitude

Univariate analysis of respondents' attitudes in sorting medical waste at the Padang City Health Center in 2019 can be seen in the following table:

Table 3 of Frequency Distribution of Respondents' Attitudes in Sorting Medical Waste in Padang City Health Center in 2019

Attitude	f	%
Negative Attitude	24	43,6
Positive Attitude	31	56,4
Total	55	100,0

Based on the table of the 55 respondents surveyed, it is known that less than half, namely 24 officers (43.6%) who have a negative attitude in sorting medical waste in Padang City Health Center in 2019.

The officer has a negative attitude the officer can be seen regarding the place of medical waste disposal needs to be labeled, just differentiate the color (5.5%), the leadership needs to apply the regulations regarding handling medical waste in health centers (3.6%)

2. Bivariate analysis

a. Relationship of knowledge with the actions of officers

Based on the bivariate analysis of the relationship of knowledge with the observance of officers in sorting solid medical waste in the Padang City Health Center in 2019 can be seen in the following table:

Table 4 Relationship of Knowledge with Officer Compliance in Medical Waste Sorting in Padang City Health Center in 2019

Know edge	Officer Actions				Jumlah	p Value	OR	
	Negative Action		Positive Action					
	f	%	f	%				
Low	4	19,0%	17	81,0%	21	100%	0,002	0,146
High	21	51,8%	13	38,2%	34	100%		
Total	25	45,5%	30	54,5%	55	100%		

The table shows that the officers who act negatively in sorting medical waste are more in the officers with high knowledge (61.8%) compared to those who have low knowledge (19.0%). Based on statistical tests, the p value <0.05 (p = 0.002). It can be concluded that there is a relationship between knowledge and the actions of officers in sorting medical waste in Padang City Health Center in 2019.

b. Relationship between Attitudes and Acting Officers

Based on the bivariate analysis of the relationship between attitude and obedience of officers in sorting solid medical waste in Padang City Health Center in 2019 can be seen in the following table:

Table 5 Relationship of attitudes with Officer Obedience in Sorting Medical Waste in Padang City Health Center in 2019

Attitude	Officer Actions				Total	p Value	
	Negative Action		Positive Action				
	f	%	f	%			
Negative Attitude	11	45,8%	13	54,2%	24	100%	1,000
Positive Attitude	14	45,2%	17	54,8%	31	100%	
Total	25	45,5%	30	54,5%	55	100%	

The table shows that there are fewer officers who act negatively in sorting medical waste on officers with a positive attitude (45.2%) compared to those who have a negative attitude (45.8%). Based on statistical tests, p value > 0.05 (p = 1,000). It can be concluded that there is no relationship between attitude and the actions of officers in sorting medical waste in Padang City Health Center in 2019.

Discussion

A. Univariate Analysis

1. Acting Officer

Officers who are in the source of waste generation in carrying out their duties still have some mistakes in sorting and compartmenting, even though they are highly required to understand and comply with applicable regulations because officers have an active role in the initial process of waste management. If the waste management process is not good from the beginning, it will have an impact on the next process to the end.

To avoid contamination and mismanagement of waste, the Padang City Health Center should improve staff knowledge and understanding through regular socialization and training regarding Republic of Indonesia Decree No. 1204 of the Republic of Indonesia regarding hospital environmental requirements and other related regulations. Follow-up on training conducted can be done by providing feedback on staff compliance such as giving rewards or penalties.

2. Knowledge

Based on observations, Padang City Health Center staff who have low knowledge related to the amount of medical waste collection required, tissue / body part storage, and the stages of medical waste management. Hospital waste management is distinguished by the type of waste including non-medical solid waste, infectious waste and sharp objects, pharmaceutical waste, cytotoxic waste, chemical waste, pressurized container waste, and radioactive waste. It also systematically regulates the stages of medical waste management that starts with waste minimization, sorting, compartmenting, transportation, temporary storage, processing and eradication.

Although the results of the research show that respondents have a good level of knowledge, but there are still some respondents with a low level of knowledge. For this reason, the Padang City Health Center is expected to be able to add and increase the insight of officers related to medical waste management through regular socialization and training.

3. Attitude

Based on the research results, it is known that there are attitudes of some respondents who disagree if the place or container of medical waste needs to be clearly labeled. In addition, there are attitudes some respondents strongly disagree that waste must be removed if 2/3 of the container has been filled.

In the Minister of Health Decree number 1204 of 2004 it is clearly regulated that each waste container is distinguished in color and clearly labeled according to the type of waste. Plastic bags lining the waste container must be removed every day or less a day if 2/3 parts have been filled with waste. Officers have good knowledge and a long working period, but in the application in the field there are still a small number of officers who behave in accordance with their knowledge and tenure.

Continued efforts are needed to change the attitude of officers in managing medical waste. Therefore, it is hoped that Padang City Puskesmas will conduct continuous

monitoring of the staff's attitude so that officers always apply knowledge about medical waste management procedures so that later officers are expected to become accustomed to applying it in the field.

B. Bivariate Analysis

1. Relationship of Knowledge with Actions of Officers

High knowledge can produce a high awareness of waste management but not for practice. This is due to the medical waste management training program that can raise awareness of high waste management but to practice returning to the commitment of each worker.

Therefore, researchers suggest that the Padang city health center conducts periodic supervision of officers' compliance in sorting solid medical waste and provides feedback in the form of rewards or reprimands so that officers become encouraged to carry out medical waste sorting better.

2. Relationship between Attitudes and Officers' Actions

Attitude is a closed response to an object or stimulus. A person's attitude in managing medical waste is influenced by several things, namely personal environmental experience, culture, mass media, and educational and religious institutions. A positive attitude will lead to proper medical waste management practices. This happens because of the high awareness in fulfilling the correct medical waste management practices. So it can be concluded that a positive attitude can lead to high awareness, and vice versa a negative attitude will trigger a low awareness in medical waste management practices.

The results showed that the officers 'poor attitude was related to the lack of officers' actions in sorting solid medical waste. This can be influenced by the lack of awareness and sense of responsibility of officers in sorting medical waste. If the awareness and sense of responsibility of officers can be increased then this can increase the compliance of officers in sorting solid medical waste in waste-producing sources. Therefore, it is expected that Padang city health centers can carry out ongoing supervision and impose rewards and penalties so that the attitude of officers in sorting medical waste can be well controlled and will ultimately lead to a great sense of responsibility.

4. CONCLUSION

- a. Health workers in the Padang City Health Center are known to be less than half, 25 staff (45.5%) who had negative actions in sorting medical waste at the Padang City Health Center in 2019.
- b. Less than half, namely 21 officers (38.2%) who have low knowledge in sorting medical waste in Padang City Health Center in 2019
- c. Less than half, namely 24 officers (43.6%) who have a negative attitude in sorting medical waste in Padang City Health Center in 2019.
- d. The relationship between knowledge and actions of officers in sorting medical waste obtained statistical test p value <0.05 ($p = 0.002$) concluded that there is a relationship between knowledge and actions of

officers in sorting medical waste in Padang City Health Center in 2019.

- e. The relationship between attitude and actions of officers in sorting medical waste obtained statistical test p value > 0.05 ($p = 1,000$) concluded that there was no relationship between attitude and actions of officers in sorting medical waste in Puskesmas Kota Padang in 2019.

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