

Evaluation of Solid Waste Management System in 'X' Hospital, Cilegon City, Banten

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AIM / OBJECTIVE

Health service activities by the hospital produce a waste of any activity in the form of medical activities and non-medical activities. Waste management policy makers always face the problem of how to predict the future amount and composition of medical solid waste, which, in turn, helps to determine the most appropriate treatment, recycling and disposal strategy (3).

'X' Hospital located in the Cilegon city, Banten is a private hospital class B that provides health services to employees, Krakatau steel and the general public. In service activities in hospital 'X' which is done every day can not be separated from the problem of waste either medical or non-medical waste, so solid waste handling consists of three types, which are medical waste, non-medical waste and food waste. The problems occurred in waste handling include medical and non-medical waste still mixed, using of body protection and waste collecting facility is not accordance with the procedure yet (2).

The purpose of this research is to analyze the solid waste management system in 'X' Hospital, Cilegon City, Banten.

METHODS

The type of research used in this study is descriptive research type with a qualitative approach that describes the state in solving the problem (4).

The research method is conducted by observing solid waste management system. The survey method is used for waste management from sources, storage, measuring the weight of medical and non-medical waste, delivery, receiving stations for delivery to third parties (PT.Wastec International), interviews to sanitation personnel, documentation and questionnaires.

This study is not related to numbers and aims to describe and describe the state or phenomenon of the hospital's solid waste management system from in-depth interviews.

RESULTS

The results of the evaluation of solid waste management system (medical and non-medical) of hospital 'X' based on Health Ministerial Decree 1204 / Menkes / SK / X / 2004 on Hospital Health Environment Requirements starting from source, storage, sorting, transportation and processing (1). Sources of waste generated from activities held in the hospital come from patients, health workers, employees and visitors. The following is a list of room sources generated by waste generation at 'X' Hospital:

Tabel 1. Source of Waste Generation In 'X' Hospital

No	Source of Waste	No	Source of Waste
1	patient care room	7	UGD
2	ICU	8	Radiologi
3	Hemodialisa	9	Endoscopy
4	Fisioterapi	10	laboratory
5	surgery room	11	PMI
6	UGD	12	Poli serang

From the data obtained that the type of solid waste produced is divided into non-medical waste as much as 98% is household waste such as from the activities of kitchen, office or waste food packaging. Meanwhile, medical waste as much as 2% is garbage derived from medical services, care, laboratory and or all objects that have been contaminated with blood or body fluids of patients.

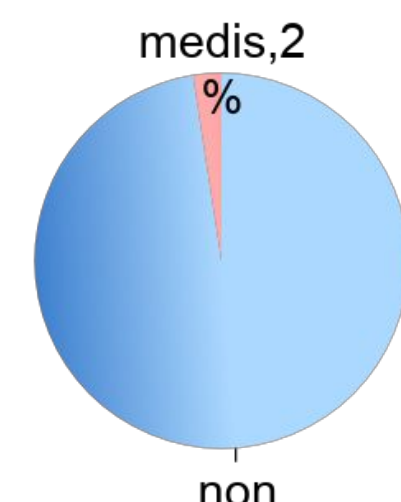


Figure 1. Composition of Waste Volume Hospitals 'X' in 2014

From the diagram can be seen the percentage of the amount of waste according to volume generated in 'X' Hospital is 4100 kg/day with the details of non-medical waste of 98% or 4000 kg/day, and medical waste of 2% or 100 kg/day.

Medical waste is collected in a plastic garbage bin marked with a plastic garbage covered with a yellow plastic bag measuring 35 cm x 60 cm placed in place of medical action. Specifically, sharps wastes are collected with containers of cardboard boxes or disposable boxes of 50 cm x 75 cm placed at the place of medical action and then transported in a trolley then taken to TPS B3 waste and transported by a third party. As for non-medical waste collected in a covered container lined with black plastic bags measuring 60 cm x 100 cm, then transported using carts, general waste is transferred to the TPS which will be taken by the cleaning service once a day to be taken to the landfill.

Transportation of medical waste is carried out simultaneously with domestic waste. The garbage collector is a janitor. There is no special officer to transport medical waste. Hygiene officers haul garbage on the basis of shift work schedule twice a day ie in the morning and afternoon. From the results of the field observation found that there is a medical waste that is not appropriate placement so that mixed with non-medical waste and hygiene officers who transport the waste does not use personal protective equipment such as masks, shoes and gloves so that the need for training and supervision of officers.

'X' Hospital does not have its own incinerator so it requires cooperation to a third party. The incinerator is used to burn medical waste. Meanwhile, for domestic waste disposal is managed by Cilegon Sanitation Department every day and 'X' hospital pay monthly levy of transport. Management of toxic hazardous waste produced by 'X' Hospital is licensed to licensed PT Limbah B3, where the process of delivery or transporting every two days.



Figure 2. Storage Of Medical And Non-medical Waste



Figure 3. TPA and The Process Of Transporting Waste

CONCLUSIONS

the conclusion of this study is effort to evaluate the solid waste management of 'X' Hospital must refer to the Decree of the Minister of Health of the Republic of Indonesia Number 1204 / Menkes/ SK / X / 2004 on Hospital Health Requirements and need to improve supervision and good cooperation with nurses and janitors in the separation of medical and non-medical waste.

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