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The Implementation of Clinical Waste Handling in Hospital Sultanah Aminah Johor Bahru (HSAJB)

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Abstract

Generation of clinical waste in hospital need a comprehensive management. If the clinical management waste poorly managed, it will cause adverse effects to human and environment. This paper presents an evaluation of the implementation level of clinical waste in Hospital Sultanah Aminah, Johor Bahru (HSAJB). Questionnaire survey, interview and observation method has been carried out to collect the data. The results reported, focus on the implementation of clinical waste segregation, collection and transportation, and also, clinical waste central storage practiced in HSAJB. The problematic areas of medical waste management in HSAJB are addressed by proposing some recommendations that will ensure that potential health and environmental risks of medical waste are minimized.

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1.0. Introduction

During the past few years, public concern increased about the management of healthcare waste on a global basis (Shinee et al., 2008). Medical waste is a special category of waste because it poses a potential health and environment risks, typically, it include sharps, human tissues or body parts and other infectious materials (Baveja et al., 2000). Approximately 15–25% (by weight) of medical waste is considered infectious (Shinee et al., 2008). Despite the fact that current medical waste management practices vary

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from hospital to hospital, the problematic areas are similar for all healthcare units and at all stages of management, including segregation, collection, packaging, storage, transport, treatment and disposal (Tsakona et al., 2007). Improper waste management can cause environmental pollution, unpleasant odors, and growth of insects, rodents and worms; it may lead to transmission of diseases like typhoid, cholera, and hepatitis through injuries from sharps contaminated with human blood (Abdulla et al., 2008). It is importance to manage clinical waste in a proper way to avoid health risks and damage to flora, fauna, and the environment.

Under the Rules of Environmental Quality (Scheduled Waste) 1989, any waste that are classified as clinical waste materials and wastes should be managed accordingly to the guidelines provided. This is because the nature of clinical waste is hazardous due to the following:

- Contain infectious agents
- Genotoxic in nature that cause DNA damage or mutations
- Toxic chemicals or dangerous
- Radioactive
- Consist of material that is sharp

Management and disposal of clinical waste in Malaysia is fully controlled by the Environmental Quality (Scheduled Waste) 1989. According to Zaimastura (2005), clinical waste generated from hospitals need a comprehensive and coordinated management. Poor management will lead to increased exposure to infectious diseases such as Hepatitis B and AIDS. Therefore, clinical waste control is very important. The main source of clinical waste disease is caused by accident involving syringes and sharp instruments. Transportation of clinical waste also has a specific guideline for reducing the risk of accidents.

Although there must be a combination of clinical waste management is, however, there is still not in compliance. According to the report, there are some irresponsible management has been filling and depositing of clinical waste in drums labelled "domestic waste", taken on discharge from the hospital in an ambulance, passenger vans and commercial vehicles, and handled by staff regular hospital staff rather than trained. In addition, needles and other sharp objects are not separated from the main waste pile nor disposed of by using the former 'sharp', as required for all hospitals and clinics.

Utusan Malaysia dated 8th September 2008 report, in a government hospital, it was found that the yellow trolleys, used to collect clinical waste is not satisfactorily maintained, and almost never wash. The situation getting worse when the waste water is allowed to flow into the common public drains, and not according to the requirement that clinical waste water must be treated first.

Engineering Division of the Ministry of Health (2000) have stated that, disposal of hazardous wastes from hospitals and healthcare institutions throughout Malaysia has become a source of public and official concern in recent years. This issue is not new. It has arisen from more than fifteen (15) years ago. But it still persists, while in 1993, the Ministry of Health (MOH) issued guidelines and policies for controlling user, transportation and disposal of waste from hospitals and health care institutions, but the problem of waste disposal is still continue to drag on as it has been reported in Utusan Malaysia dated 8 September 2008, the Consumers Association of Penang (CAP) has urged the Health Ministry and the Ministry of Natural Resources and Environment (NRE) to explain why clinical waste is handled and disposed of in a manner contrary to the rules, but the problem is already known identified several years ago.

Apart from the policies and guidelines, there are other initiatives that were undertaken by the government. One of the initiative is the training of hospital staff in the development of an action plan for segregation, handling and transportation of hospital wastes in the hospitals of central revenue collection point at the central storage facility and the production of a clear system that will detect movement from the time of hospital waste generated until the time he was dumped. The privatization program is one of the other initiatives taken by the government in addressing this problem (Khainih Tasan, 2005). However, this issue was still continued and even getting serious.

With regards to the needs of the study, there was a major objective to be achieved at the end of the study. The objective of the study is to assess the clinical waste handling activities at the Hospital Sultanah Aminah, Johor Bahru

2.0. Methodologies

Data collection was carried out by questionnaires, interview and observation in March 2011. The survey was conducted for evaluation of clinical waste handling in Hospital Sultanah Aminah Johor Bahru and the information collected related to the process of segregation, collection and transportation and also storage. Supervisors from Pantai Medivest Sdn Bhd in charge of handling clinical waste were interviewed. The questionnaires were distributed to 200 respondents through the hospital's administration. The observation was made on the process of segregation, collection, transportation and storage. The survey questions involved two aspects of clinical waste handling practice: degree of implementation of the segregation practice and also the degree of the implementation of the collection and transportation operation. However, at the end of this survey, only 152 questionnaires were returned. All of the activities are observed include the central storage of the clinical waste. Much information regarding the role of Concession Company in handling clinical waste concerned in an interview session. The data forms and questionnaires were completed and stored for further analysis. Data were coded and analyzed using SPSS 16 software.

3.0. Results

3.1. Segregation

Hospital's staff who are directly involved with clinical waste are doctors, medical assistant officer, nurses and others. They are responsible in segregation stage as stated in the guideline published by Malaysia Ministry of Health. Where, in the guideline stated that clinical waste should be deposited in yellow beg plastic that lined in the bag holder provided by the concession company, infectious clinical waste should be deposited in the blue bag plastic and used sharp should be deposited into a sharp container that lined with the yellow bag plastic.

However, based on the questionnaire distributed, show that the most practiced activity is depositing the general waste into the black plastic provided. While the least practice activity is depositing infectious waste into the blue bag. Observation made. Found that there is no blue bag plastic provided in the utility rooms that observed. Only yellow bin lined with yellow bag plastic and general waste bin lined with black bag plastic are found.

Besides staffs plays their role in segregation stage, Concession Company also play a major role, where, they are responsible to supply all the equipment needed in this stage. The equipment that they supplied is yellow bin, sharp container, yellow and blue bag plastic. All the equipment supplied is in various sizes.

Pantai Medivest Sdn Bhd not only responsible in supplying all the equipment, but also responsible to ensure there will be no misused of the equipment. According to the respondent interviewed, it is found that some of the staff had misused the equipment provided.

3.2. Collection and Transportation

From the results, it shows that Pantai Medivest Sdn Bhd had provided 12 porters to carry out the collection and transportation of clinical waste operation. The operation scheduled three times per day. The operation will start from the central storage and following to the next location following the route as per specified by the hospital.

Analysis from the questionnaire show that the most practice activity is sharp container which has been filled to the filling line indicated on the container, sealed before it was collected. While the least practice activity is secure the area by plastic tape and warning sign.

The study conducted, does not only depend on the questionnaire distributed, but observation also conducted to support the result from the questionnaire and interview. While observation conducted, found that the porter that operate the collection and transportation does not wearing a proper personal protective equipment provided, whereas from the questionnaire indicates that wearing proper protective equipment is one of the most implemented activity. Besides that, from the observation, found that yellow bin do not relined with the yellow bag plastic. Furthermore, the on duty staff does not have any sense to reline the new yellow bag plastic into the bin. They continuously throw the clinical waste into that bin. This shows the difference between the answers given by respondents who answered the questionnaires by the prevailing reality. The observations made also revealed that the yellow plastic bags containing clinical waste bound without tied using the cable tier.

3.3. Clinical Waste Central Storage

When the observation carried out, the author found that the clinical waste central store is located at the same location with the general waste. Clinical waste central storage should not locate near to the general waste central storage. Consequence of this, clinical waste collection center is not only tainted by the stench coming from the public waste, but also the area into a place laying the damaged bins.

During the observation, the author found that the clinical waste collection center is in a poorly managed condition. Used boot thrown at the edge of the collection center. Garbage bins full of rubbish and plastic yellow scattered on the floor. In a corner of the public waste collection center there was a yellow wheeled bins are placed in storage provided.

4.0. Discussion

As a conclusion, after survey carried out, some issues in handling clinical waste at Hospital Sultanah Aminah Johor Bahru highlighted. However, the survey conducted does not represent the practice of handling clinical waste in Malaysia as a whole.

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