

# **A STUDY ON MANAGEMENT OF CLINICAL WASTE AT HOSPITALS AND HEALTH CLINICS**

## **Introduction/Background**

Good management towards clinical waste is important to all hospitals and health institutions in order to ensure the people/patient are free from risk of infectious disease and to avoid any pollution to the environment. Clinical waste has been classified as schedule waste under the Environment Quality Act 1974. Under this Act, all hospitals and health institutions that produce clinical waste are required to manage the clinical waste according to the stipulated regulations.

Clinical waste includes human or animal tissues, blood or body fluids, drugs or other pharmaceutical products, cotton, cleaners, needles and other sharp objects that can bring harm to anyone who come into contact with them. From October 1996, the Ministry had privatized the management of the clinical waste. As at December 2007, the concession companies were responsible for the management of clinical waste in 136 hospitals and 10 health institutions throughout the country. From 2005 to 2007, the Ministry had spent RM131.40 million for the management of clinical waste.

## **Laws and Regulations**

Management of clinical waste is subject to the following laws and regulations:

- a. Environment Quality Act 1974
- b. Occupational Safety and Health Act 1994
- c. Prevention and Infectious Disease Act 1988
- d. Guidelines For The Management Of Clinical and Related Wastes In Hospital and Health Care Establishments 1993

- e. Guidelines For The Applications Of The Deduction Formula For The Privatization Of Hospital Support Services
- f. Project Operation Guidelines For Clinical Waste Management Service; and
- g. Guidelines On Clinical Waste Management For Health Clinic Under Ministry Of Health Number 1 Year 2002

### **Objective of the Study**

The objective of the study is to determine whether the management of clinical waste at the hospital and clinic has been done effectively, efficiently and meet the requirement of the laws and guidelines. It is also to ensure that the environment is not contaminated by the clinical waste.

### **Audit Scope and Methodology**

The study covered six hospitals and 12 clinics and it focused on the aspects of clinical waste segregation, waste pickup schedule, waste storing, transportation and disposal. Files, records and relevant documents for the period of 2005 until 2007 were scrutinized and reviewed at the Engineering Servicing Department, Ministry of Health. Besides that, physical checking and interviews were conducted as well.

The audit was conducted based on the Environment Audit Guidelines as well as the Performance Audit Guidelines which includes preliminary study on the subject matter, preparation of Audit Planning Memorandum, Entrance Conference, Carrying out the Audit, Exit Conference and Submission of final Audit Report to the Auditee.

## **Audit Findings**

Among the weaknesses found in the management of clinical waste in hospitals and health clinics were:

- a. Treasury Circular Number 2 Year 1995 requires a contract to be signed 4 months after the issuance of the Letter Of Acceptance. However, there were delays in signing these concession agreements between 3 days to 66 months.
- b. Clinical waste has been thrown into bins containing domestic waste where the needles and sharp pointed clinical waste have not been separated and disposed off properly. This will endanger hospital staff, concession company workers and the public.
- c. At the health clinics, the collection of clinical waste is done by the clinics staff. The frequency of collection is determined by the staff depending on the types and amount of waste. It was found that the yellow bins in all health clinics have not been washed or only been washed once in a while. The water used for washing these bins flowed into the public drains and not into the proper drainage system.
- d. Transportation of clinical waste from the health clinics to the hospitals did not follow the proper procedures. The vehicles did not have licenses from the Department of Environment. The clinical waste from the health clinics were transported by using clinic vehicles such as ambulances, passenger vans and four wheel drives. In addition, there were no consignment notes and the staffs handling these wastes were not trained.

## Recommendations

To ensure the clinical waste in hospitals and health clinics is properly and safely managed, it is recommended that the Ministry need:

- a. To fill up the vacant posts in the Operations Section to enhance monitoring works of the management of clinical waste in all hospitals and health clinics. Personnel in the health clinics should be trained to handle clinical waste in a proper manner and to attend user training courses organized by the concession companies.
- b. To ensure that there is no delay in signing of contract documents with concession companies. These contracts are important for the hospitals and health clinics as a reference to ensure that the quality and specifications of services and items supplied are in accordance with the terms and conditions of the contracts.
- c. To update the guidelines regarding the deduction of service fees of the concession companies which fail to comply with the terms and conditions of the contracts constantly. This is to ensure that deductions can be made accordingly.
- d. To ensure that clinical wastes are stored at the health clinics located in suitable places with a temperature between 4C to 6C to avoid spreading of diseases.
- e. To take actions to overcome problems faced by health clinics related to vehicles used to transport clinical wastes. Special vehicles should be used to transport clinical wastes from all health clinics within the same district or under the administration of the same District Health Office. For this purpose, a schedule of utilization of these vehicles has to be prepared.

These vehicles should have valid license from the Department Of Environment.

- f. To consider reducing the service fees paid to the concession companies since the collection and transportation of clinical wastes to hospitals are being carried out by the staff of the health clinics whereas the concession companies are only involved in the transportation of clinical wastes from hospitals to disposal plants.
- g. To ensure pharmaceutical wastes such as medicines are not disposed by non-licensed concession companies since medicines are not categorized as clinical wastes.

### **Impact and Results**

The Health Ministry had taken several actions as follows to overcome the issues raised by the National Audit Department:

- a. Discussing with the Public Service Department pertaining to the vacant posts in the Operations Section. Personnel in the health clinics were sent to attend courses on handling clinical waste and user training organized by the concession companies.
- b. Signing of the contract documents in accordance to the Treasury Circular Number 2 Year 1995.
- c. Studying the guidelines on the deduction of service fees of the concession companies which fail to comply with the terms and conditions of the contracts.

- d. Developing guidelines to ensure that clinical waste are stored at the health clinics located in suitable places with a temperature between 4C to 6C.
- e. Special vehicle to be used to transport clinical wastes from all health clinics within the same district or under the administration of the same District Health Office.
- f. Reviewing the service fees paid to the concession companies since the collection and transportation of clinical wastes to hospitals are being carried out by the staff of the health clinics.
- g. Ensuring pharmaceutical wastes will be disposed by license concession companies.

### **Challenges and Barriers**

There were several challenges and barriers while conducting the study. The challenges and barriers are:

- a. Lack of knowledge on clinical waste management of the hospitals and health clinics and this resulted in the difficulty to gather information from the staff.
- b. It took a longer time to obtain the documents and some of the documents given were incomplete for example documents about the budget, concession agreement, Centre Management Information System (CMIS), payment schedule and so forth. These affected the audit schedule and difficulty to carry out the checking.

- c. Difficulty in convincing the staff at the hospitals and health clinic about adherence to the stipulated laws and guideline and to change their mindset about best practices to handle clinical waste as they perceived that the laws and guidelines made their work more difficult.
- d. Lack of technical expert on the part of the Audit team especially to read the bottle's label, differences between domestic waste and clinical waste, procedure being done at the disposal place etc.

### **Lessons Learned**

It is vital that the clinical waste is handled with the right procedures. Any mishandling of the clinical waste can be harmful to the environment and people surround. By conducting this study, the knowledge and experience of the Audit team on clinical waste management has been increased greatly especially on the importance of best practices on clinical waste management and its impact to the environment.