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Awareness and Current Practices of Biomedical Waste Management in Kandy District, Sri Lanka

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Abstract

Improper management of biomedical waste possesses serious occupational health consequences and negative environmental impacts. The present study aimed to conduct a preliminary survey on current biomedical waste management practices and the awareness of staff on biomedical waste management in hospitals of Kandy district in the central province of Sri Lanka. Eight hospitals including teaching, general, divisional, district base and combinations of teaching and general hospitals were randomly selected for the study. Semi-structured interviews were carried out with hospital staff to collect data on the awareness and perception of sources, handling and disposal of biomedical waste. Descriptive statistics were applied for the analysis of data. The major sources of biomedical waste were composed of waste from blood bank, outpatient departments, general laboratories, mortuary, chemotherapy ward, surgery ward, delivery ward and pharmacy. Radioactive, chemical, infectious, pathological and pharmaceutical waste were contained in clinical waste. Results revealed that 87.5% of interviewed hospitals maintain a department for the biomedical waste management while 62.5% of interviewed hospitals maintain separate storage facilities. Waste segregation was practiced in every interviewed hospital in accordance with Sri Lanka College of Microbiologists (SLCM) national guidelines. Minor staff handles the infectious and general waste and use protective clothing during waste handling. In contrast, other hospitals used large bins with color codes to store waste before disposal. Open burning was practiced by 62.5% of hospitals for disposal of polythene, sharps, cotton, plastic, infectious waste as well. 37.8% of institutes practice incineration and 25% bury needles and pathological waste near the hospital premises. 12.5% of hospitals dispose their placental waste in a pit. Considering awareness on biomedical waste management, almost all interviewed staff were aware of the consequences of improper management of biomedical waste. 62.5% of them suggested incineration as the best method of disposing clinical waste. Nevertheless, lack of bins, lack of awareness of patients and visitors on consequences of clinical waste, insufficient height of stack of the incinerator, lack of incineration facilities, practical difficulties in waste segregation and lack of facilities for the management of e-waste and radioactive waste were the major constraints related to biomedical waste management in these hospitals. The present study suggests further improvement in the existing system through capacity mobilization of biomedical waste management and implementation of proper disposal methods for radioactive waste management.

Keywords: Biomedical waste, Healthcare, Hazardous, Kandy district