

**Assessment of the Health Care Waste Management Regime at Korle-Bu Teaching Hospital  
in Accra**

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**ABSTRACT**

Background: The proper management of Health Care Wastes (HCW) is a major problem facing most Health Care Facilities (HCF's) in sub-Saharan Africa. This is due to the fact that many institutions do not have specific guidelines for the proper management of these wastes. Lack of well trained personnel to deal effectively with HCW and limited budgetary allocation for procurement of appropriate equipment can also be cited as a reason for some of the problems faced by the HCF's in managing HCW. This study examined the health care waste management regime at the Korle Bu Teaching Hospital in Accra. The aim of the study was to assess the current health care waste management practices at the hospital and make recommendations that will inform the formulation of an internal Health Care Waste Management Plan (HCWMP) for the hazardous Health Care Wastes (HCW) generated at the clinical and diagnostic units of the hospital. Methods: The study design was a descriptive cross-sectional study which employed both quantitative and qualitative data gathering methods. The convenience sampling technique (a non-probability sampling technique) was used to obtain a sample of three hundred and twenty-three (323) personnel made up of nurses, orderlies, health care assistants, laboratory staff, pharmacy staff, radiologists and waste management staff for the study. The rapid assessment tool jointly designed by the W.H.O and Emergence (W.H.O, 2004) was adapted to estimate the average daily quantities of hazardous and non-hazardous HCW generated by the clinical and diagnostic units of the hospital. A questionnaire made up of close and open ended items was used to elicit data on the current health care waste management practices at the hospital. Finally, key informant interviews were used to validate the responses given by personnel during the questionnaire interview. Results: The results of this study revealed that both general non-risk and hazardous HCW were generated at the KBTH. The Environmental Health unit which is responsible for HCWM at the hospital did not have any valid data on the quantities of HCW generated for the past five years. The results of a HCW generation survey conducted over a two

weeks period revealed that the average daily generation of HCW was 2,043.1kg (2.0 tons). This was made up of 558.7kg of hazardous wastes and 1,484.4kg of non hazardous. For both the inpatient and outpatient services of the hospital, there were statistically significant differences between the generation of hazardous and non-hazardous HCW (t-test;  $p=0.027$ ) for inpatient services and (t-test;  $p=0.001$ ) for outpatient services. There were however no statistically significant differences between the hazardous HCW generation by the inpatient and outpatient services (t-test;  $p=0.055$ ). The total composition of the hazardous and non-hazardous HCW in the general waste stream on a percentage by weight basis was found to be 27.4% for hazardous HCW and 72.7% for non hazardous Hew. The major contributor to the total waste stream was the department of surgery and the lowest generator of HCW at the KBTH was the polyclinic. There was no standard colour coding in place and containers for HCW were not labeled according to the specifications by the W.H.O and the MoH. This contributed to the mixing up of hazardous and non- hazardous HCW rendering the entire waste stream hazardous. Personnel of the Environmental Health Unit were mostly involved in the collection and final treatment of HeW but these groups of personnel were found not to use the full Personal Protective Equipment (PPE) approved by the MoH and the W.H.O. Most of the HCW generated at the hospital is incinerated. From the results of this study, it was obvious that HCWM is not practiced according to the technical guidelines laid down by the W.H.O and the MoH. **Recommendations:** It is recommended among other things that a health care waste management committee made up of relevant stakeholders be put in place to formulate clear guidelines for the management of hazardous HeW generated at the hospital. A significant reduction of the quantity of hazardous HeW generated should be encouraged through programs such as source reduction, the use of recyclable products and waste segregation. To this end, the three-bin system for sharps, hazardous HeW and non-hazardous HeW should be adapted and effectively used by all the departments of the hospital.

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