

# Healthcare Waste Management in a Regional Hospital, Greater Accra Region, Ghana

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2012

## ABSTRACT

Healthcare waste (HCW) has been of growing concern due to its vast increment in weight as a result of improvement in medical services all over the world. However, its management has become of critical concern in developing countries such as Ghana. A cross-sectional descriptive study was carried out between October 2010 and March 2011 at the Regional Hospital in Greater-Accra Region of Ghana with the aim of assessing the solid waste management practices and their effect on public hygiene in the hospital. Structured questionnaires, key informant interviews, observations and microbiological tests were used to achieve the aim of study. A total of 300 healthcare workers were selected by proportionate sampling from the various departments of the hospital and interviewed using questionnaires to determine their knowledge and practice with regards to HCW. An evaluation of the status of the waste management level in the health facility was carried out using the following criteria: segregation, containerization, storage, treatment and disposal. Results show that 59.3% (178/300) of the workers had knowledge on MOH Policy and Guidelines for HCW management in Ghana. Sixty-one percent (183/ 300) had had training on infectious waste management. Based on defined criteria adapted from Townend and Cheeseman (2005), the study found that the level of healthcare waste management practice was unsustainable. The commonest pathogen found on waste bins inside the wards was *Bacillus SPP* OCCURRING on 80% of the bins and on 88.9% of bins located outside the wards. *Vibrio parahaemolyticus* was not recovered from any of the bins in the wards but was present on 11.1 % of bins located outside. Of much concern were, *Staphylococcus aureus*, *Enterococcus spp*, *Escherichia coli* and *Pseudomonas spp* since these are known to cause human diseases when they get into contact with immunocompromised

persons. There was no association between microorganism and location of bins using Pearson product moment correlations ( $p>0.05$ ) indicating that there is a very weak or non-existent linear relationship between these variables. In conclusion, majority of the healthcare facility workers had knowledge on appropriate ways of HCW management but there was no compliance due to lack of materials and equipments and enforcement by hospital authorities. Current practices regarding HCW management is generally below standard. Using a modified Townend and Cheeseman Guidelines, current practices were ranked '0' showing a level of unsustainable healthcare waste management. Pathogens that were exposed to the public due to insanitary state of waste containers were identified among which were *Enterococcus spp*, *Bacillus spp.*, *Acinetobacter spp* and *Staphylococcus spp*. It was recommended that training of healthcare workers should be intensified. Compliance should always be enforced whilst materials and equipments for management of healthcare waste should always be made available.

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