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A composite index to measure the adoption level of healthcare waste management of base hospitals in Uwa Province of Sri Lanka

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Abstract

Healthcare wastes are highly infectious and management of healthcare waste is of great importance due to its potential environmental hazards and public health risks. In recent years, many efforts have been made by environmental regulatory agencies towards the better management of wastes through healthcare facilities. But there is no valid criterion to assess the adoption level of standard method of waste care management. Therefore this study brings into focus to develop a Composite Index called Healthcare Waste Management Index (HWMI) to measure the adoption level of standard methods of waste collection and disposal methods based on the information obtained from the base hospitals of Uwa Province as a case study, in order to assess human and environmental risks due to their improper management. Eight main categories of waste management that were identified by the World Health organization were considered for the study. Information on these waste categories were circulated among 20 subject specialists and weightages were obtained for each categories depending on its influence on human health and environment. Current practices of waste management for each category were obtained from hospitals and they were ranked from zero to three with respect to their adoption compare to the standard practices. Finally Composite Index was developed with the ratio of linear additive rank of each waste category by multiplying the relevant weightages and highest rank (which is 3 in this case) multiply by the total weightage. Calculated index value lie between 0 to 1 and value of 1 indicate the complete adoption of standard methods. Index value obtained for six hospitals lie in between 0.69 to 0.58, recording the highest Index value from Diyatalawa base hospital. This index could be used as basic tool for grading and ranking the status of healthcare management practices.

Key words: Healthcare waste management, Healthcare Waste Management Index, Waste disposal