Healthcare waste management requires an organized, systematic channeling of waste, consistent with acceptable public health and environmental safeguards (Vanesh et al., 2019). The Ministry of Health estimates that 47% of hospital waste generated cannot be accounted for (Hugo & Lima, 2021). This indicates improper segregation, thus putting health care workers, the population, and the general environment at risk. The broad objective was to assess nurses' knowledge, attitude, and practices in healthcare waste management at Nyambene Level 4 Hospital. The study adopted a cross-sectional design. The target population of this study was nurses working in Nyambene level 4 Hospital with a sample size of 61 nurses. The data collection tool was the questionnaire. The study findings showed that 93.4% (57) of the nurses had good knowledge of waste management, 52.46% (32) of the nurses had a positive attitude and majority (55.7% (34) of the nurses had average waste management practices. Generally, the nurses had good knowledge of waste management. Most nurses had a positive attitude towards prioritizing waste disposal, among other activities in the hospital, and the nurse's practice was generally average. The researchers recommended regular training and education for the nurses, awarding certificates and tokens to nurses who show proper waste management and the administration to carry out regular health care waste management inspections. For example, ensuring each department has three waste management bins. In addition, the researchers recommended introduction of an infection control program to prevent and stop transmission of infections due to improper waste management.