

Waste segregation and management practices in voluntary medical male circumcision settings

In Uganda, it is sadly common to find non-functional incinerators or no fuel to run incinerators at public healthcare facilities, a situation that has led to open dumping and burning of unsegregated waste (both hazardous and non-hazardous waste mixed). Medical waste if not properly handled, contributes to the spread of communicable diseases including HIV, hepatitis and other blood-borne diseases and pollutes the environment.

Voluntary medical male circumcision (VMMC) has become an increasingly known biomedical intervention for reducing transmission of HIV in 2010 when Uganda began implementation following guidelines from the World Health Organisation. This saw an increase in demand for VMMC services which generated high quantities of hazardous waste arising from single-use disposable items during surgical procedures. Healthcare facilities were to plan for additional resources (labour force, waste collection materials) to collect and dispose of additional piles of waste.

In April 2013, when the USAID/SUSTAIN project started supporting 14 regional referral and general hospitals to offer VMMC services, ensuring proper management and disposal of waste from VMMC procedures was high priority.

Along with the Uganda Ministry of Health's Quality Assurance department, the project embarked on training and orientating relevant personnel (circumcisers, assistant circumcisers, cleaners and laundry staff) in proper in-house management of VMMC waste. Through continuous medical education sessions, classroom and practical trainings, various topics ranging from the use of protective equipment; classification and segregation of waste, interim storage and safe disposal of waste were discussed with VMMC teams. Internal standard operating procedures were also printed and posted in theatres to remind staff.

On average, a single VMMC procedure generates 0.5 kg of waste. Also, VMMC activities produce large amounts of disposable metallic waste that cannot be destroyed at facilities increasing the volume of waste generated at healthcare facilities.



A VMMC Nursing Assistant, explains how the colour-coded bins with liners are used for waste disposal. In the background are copies of Standard operating procedures displayed on the walls



Labelled buckets containing liquid mixtures where used sharps are placed, dried and before interim storage



Burning some of the waste at the repaired incinerator at Gulu Hospital

USAID/SUSTAIN provided additional waste segregation materials (colour-coded bins and bin liners and protective gear including gloves and theatre gowns) to supported hospitals for routine use during surgical procedures. Using the materials, waste is segregated at the surgical site and bagged separately using appropriate colour-coded plastic bags before disposal.

Since VMMC activities produce large amounts of disposable metallic waste that cannot be destroyed at facilities, the project contracted a company to collect and transport metallic waste from supported facilities for destruction. Between April 2013 and August 2014, up to 1,766 kilogrammes of metallic waste were collected for destruction from 11 hospitals. Additionally, project-supported biomedical engineers at regional facilities are helping to repair hospital incinerators, many of which had been broken for years.

By September 2014, VMMC departments at hospitals had greatly improved in waste segregation, management and infection control activities. Out of the 14 project-supported hospitals where VMMC activities are conducted, VMMC units at 11 hospitals have scored at least 80% and above in infection control measures, while the remaining 3 hospitals scored between 50%-80%. All 14 supported hospitals began with baseline scores below 50%.

Following the improvements in VMMC settings, USAID/SUSTAIN has started discussions with the Hospital Directors and Senior Nursing Officers to explore and use trained VMMC teams to mentor and coach other hospital staff on required practices, including ordering sufficient waste segregation supplies from the National Medical Store.