

## 15. Health Care Waste Management

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<b>Useful Tools</b>	23 Supply Chain Management System (SCMS). Male Circumcision Health Care Waste Management Toolkit: SCMS 2012
<b>Useful International Guidance Documents</b>	20 Management of Solid Health Care Waste at Primary Health Care Centers: A Decision-Making Guide

**Objective(s):** To ensure that health care risk waste is properly managed in order to protect health workers, the community, and/or the environment

**Description:** Waste produced during VMMC activities carries a high risk of infection and injury for health care professionals and patients, if not managed properly. To avoid serious public health consequences and substantial environmental impact, it is essential to develop safe and reliable methods for handling and treating health care risk waste (HCRW) (see TOOL 23).

Health care waste management (HCWM) spans a number of different stages from generation, to treatment, to disposal of waste (HCWM cycle or cradle-to-grave cycle). To regulate the many steps within the cycle, service providers must have clear standard operating procedures on the segregation, handling, storage, transport, treatment, and disposal of waste. The easiest way to establish proper HCWM is to draft a waste management plan based upon local norms, standards, and/or guidelines—or, in their absence, refer to WHO guidance materials (see GUIDANCE DOCUMENT 19). This plan will address the HCWM cycle by carefully implementing necessary measures and allocating resources through cost-effective solutions. To ensure proper management, a successful HCWM plan should:

- Clearly define the point of generation within the service site(s) (e.g., blood-drawing area, operating theater, HTC areas, and recovery area)
- Propose HCWM product requirements/specifications
- Develop procedures and job aids for the identification, segregation, storage, transport, treatment, and disposal of health care waste
- Set standard requirements for clinical staff safety and training (e.g., training schedule, personal protective equipment, cleaning, and personal hygiene)
- Develop a monitoring and incident reporting system
- Propose environmentally sound treatment and disposal methods
- Define responsibilities of clinical staff, administration, regional and local governments

Countries are required to establish a proper health care waste management system that addresses segregation, storage, transport, treatment, and disposal of all relevant health care waste categories. When designing a waste management system, it is essential to assess local infrastructure upfront, to determine which accepted option will emerge as the most practical. The options for the disposal of metal instruments include the burial of instruments in a secure sharps pits/concrete vault, transporting the instruments to a recycling/smelting facility, or specialized encapsulation.

To ensure that short-term and long-term VMMC service sites are fully prepared prior to the launch of services, HCWM requirements and specifications must be independently assessed to identify waste management practices, procedures, and risks at the national, regional, and service site levels. This assessment must be incorporated into the VMMC facility assessment. In addition, service sites must ensure that all required HCWM commodities are clearly specified during the planning stage and allow for adequate lead times.

#### **Case Study—Health Care Waste Management (HCWM)**

To help reduce HIV transmission, the Government of the Kingdom of Swaziland established a campaign to perform over 80,000 adult VMMCs. The existing HCWM infrastructure could not support the additional waste generated. Therefore, the national government requested PEPFAR's assistance to strengthen their systems. The Supply Chain Management System (SCMS) was tasked to work with the national government to assess and improve the existing HCWM infrastructure to manage the campaign's health care risk waste (HCRW) properly.

Systems strengthening efforts were coordinated with the MOH and Swaziland Environmental Authority through each stage of development and implementation of the system. The following key activities were included:

- Guidelines were developed that outlined standard operating procedures (SOPs) for handling, storing, treating, and disposing of health care waste, as well as personnel training requirements.
- A chain of responsibility was created so that personnel are accountable for every step in the process, and the process is managed accordingly.
- Secure storage areas were developed that are accessible only to authorized personnel. These storage areas are protected from the weather and/or other environmental factors.
- A waste collection and delivery system was established to move infectious waste from the VMMC service sites to regional hospitals for treatment and final disposal.
- A monitoring tool was developed that empowers the MOH to conduct regular program monitoring. This monitoring tool ensures that practices are properly maintained so that risk and disease are minimized.
- The required waste disposal commodities, hazardous waste liners, bins, and personal protective equipment were procured.
- Training curricula and materials were developed that address the critical requirements for the program so that the safety of staff and safe handling of infectious waste can be ensured.

The overall outcome was the establishment of a waste management program with national applicability that begins at the point of generation and extends to disposal.

Through coordinated infrastructure improvements (e.g., incinerator refurbishment and installation; strengthened supply chains; development and implementation of SOPs, training curricula, and monitoring; and establishment of public-private partnerships for services such as waste transport), a HCWM system was developed. This system has been replicated and implemented in other service sites and health facilities.