

Health Care Waste Management in Rivers State

Improper management of waste generated in health facilities can have direct health impacts on the community, health workers, and on the environment. In addition, an environment polluted by inadequate waste treatment can have indirect health effects on the community. Improved health care waste management (HCWM) systems lead to higher quality health services as well as economic benefits—economies of scale and job creation.

Strengths

National policy: The National HCWM Policy (2013) for domestication of the Rivers state HCWM policy is the framework for reducing the risk of improper handling and disposal of health care waste.

Commitment: Major stakeholders such as the Ministry of Health and Ministry of Environment have shown strong commitment to improved safety of health workers and communities and environmental conditions in Rivers state.

Trained health workers: In 2016, AIDSFree trained **2,036** health workers and **658** waste handlers in HCWM knowledge and skills in two local government areas (LGAs).

Supply chain strengthening: AIDSFree provided seed stock to 30 facilities in Rivers state whose personnel had been trained on logistics for HCWM. This stock included 20,900 bin liners; 605 personal protective equipment (PPE)—including boots, gloves, goggles, aprons, and face masks; 174 waste bins; and 1525 safety boxes.

Opportunities and Rationale for Improved HCWM Systems

- **Waste treatment equipment:** There are three high-temperature incinerators in the state: University of Port Harcourt Teaching Hospital, Braithwaite Memorial Hospital, and Boskel Nigeria Limited—this equipment could be utilized for multiple health facilities through a transportation network.
- Public-private partnerships (PPPs) for HCWM can lead to improved quality of health facility services with **private sector investment** reducing public sector burden and can create job opportunities for residents.
- Health worker segregation of waste creates the **opportunity for profitable municipal waste recycling** of non-medical waste, including glass, metals, and plastic.



- Smart investment of funds into coordinated HCWM systems at the state level can **reduce the overall cost of waste management**.
- Coordination of HCWM activities at the state level can lead to **economies of scale**—procurement of HCWM commodities in quantity creates significant cost savings compared to LGA- or facility-level procurement.
- Improved HCWM reduces the risk of health worker injury due to needlestick injuries/exposure to blood and body fluids, **reducing costs** of post-exposure prophylaxis (PEP) and costs of training new health workers due to attrition/illness.
- **Reduced environmental degradation** is possible through a policy environment that supports, monitors, and enforces proper HCWM.
- A safe working environment **attracts high-quality personnel** to the public sector and reduces the “brain drain” of health care workers to the West.
- **Community perception** of public sector health facilities as providing high-quality health services increases citizen satisfaction and uptake of services, which can lead to a reduction in disease burden.

Key Challenges—Assessment Results

- **Needlestick injuries** are occurring among health workers in Rivers state—nearly a third of clinical service providers (CSPs) reported a needlestick during the previous six months.
- **Awareness of color coding for HCW segregation** is low among health workers.
- **Open burning of waste** is prevalent in area health facilities.
- Awareness of **color-coding for HCW** is low among health workers, in general: 27.3 percent for officers-in-charge, 37.7% for environmental health workers, and 40% for CSPs.
- Most of the health facilities (82%) reported **no budgetary allocation for HCWM** and only 25 percent of all facilities had an **annual workplan** on HCWM.
- Knowledge of **personal protective equipment** (PPE) was lowest among environmental health workers in primary health facilities; generally the use of PPE among these waste handlers was poor.
- **Less-than-optimal waste disposal methods**, such as burial and open burning in a hole or enclosure, were reported by nearly half of the facilities (40.9%).
- Within the 6 months prior to the survey, 18 percent of primary health care facilities experienced stockouts of bin liners; 50 percent of secondary health facilities experienced **stockouts** of disposable gloves.

- Less than half (45%) of observed CSPs practiced **handwashing** with soap and water at key moments prior to and after client interaction.

Threats

- **Need for state-specific HCWM policy:** While the National HCWM Policy serves as a framework, a Rivers state-specific policy is crucial and is under development.
- **Inconsistent availability of commodities:** For appropriate and cost-effective segregation, transport, treatment, and disposal, waste bins/color-coded bin liners must be consistently available at health facilities.
- **Waste disposal facilities:** Landfills are not available within the state, but could be provided in a fenced off area outside the city center with coordination from the Ministry of Environment and Ministry of Land (and other relevant agencies).

Potential Solutions toward Strengthening the HCWM System

- Coordination with FHI 360 (U.S. Government lead implementing partner in Rivers state) through the Strengthening Integrated Delivery of HIV/AIDS Services (SIDHAS) project.
- AIDSFree can provide hard and soft copies of training manuals and materials to stakeholders and partners for continued incorporation into their programming.
- Efforts to establish infection prevention and control (IPC) committees to provide supportive supervision for IPC/HCWM improvement within health facilities of all levels in Rivers state should continue.
- Efforts to continually consult and update facility action plans developed with AIDSFree should continue with supportive supervision to ensure ongoing efforts and results are evaluated.
- Ensure provision of budget line for HCWM commodities at the state level as a priority.
- Rivers state is encouraged to utilize the provided seed stock and continue ensuring that LGAs and facility management continue to procure essential IPC/HCWM supplies using bundled procurement (safety boxes procured in sufficient quantity with syringes procured) and ensure that bins/bin liners and PPE are consistently available for use in all facilities.
- Capacity building for public and private health institutions on HCWM should continue, with an emphasis on waste minimization, segregation, handling, storage, and transportation.
- Capacity building for waste handlers, including those attached to waste management contractors, should be ongoing, with an emphasis on the hazards/dangers of improper HCWM, use of PPE and treatment, and health care waste disposal options.

- The Ministry of Environment, through the State Waste Management Agency, could pilot waste collection, treatment, and disposal in one LGA in Rivers state, starting with transport of filled safety boxes using appropriate covered vehicle and conveying them to University of Port-Harcourt Teaching Hospital, the nearest high-temperature incinerator.

Collaboration and Stakeholders—PPP Opportunities

The private sector companies operating in Rivers state could be approached with a proposal to support the provision of HCWM segregation commodities, as well as PPE, to be distributed to the health facilities. These companies include—but are not limited to:

- Boskel Nigeria Limited
- Pan African Health Foundation
- International oil companies.

Examples of potential partnerships include:

- Provision of HCWM commodities through engagement of PPP to ensure availability of safety boxes, color-coded bin liners to be distributed to all the health facilities.
- Development of a PPP for collection, transport, and management of health care waste through a transport network utilizing existing high-temperature incinerators in Rivers—further discussions are needed to discuss options that could create jobs and profit for a private provider.

For more information

Visit the AIDSFree website: <https://aidsfree.usaid.gov/countries/nigeria>

Access the AIDSFree IPC/HCWM Training materials:

<https://aidsfree.usaid.gov/collections/aidsfree-nigeria-infection-prevention-and-control-and-health-care-waste-management>