

Health Care Waste Management in Cross River State

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

Strengths

National policy: The National HCWM Policy (2013) for domestication of the Cross River HCWM Policy serves as the framework for reducing the risk of improper handling and disposal of health care waste.

Commitment: Stakeholders such as the Ministry of Health and Ministry of Environment have shown a strong commitment to improving the safety of health workers and communities and environmental conditions in Cross River state. The current Commissioner for Health, who has previous clinical experience in an international quality control company, is highly invested in improving the HCWM process.

Trainers: The Medical and Dental Consultants Association of Nigeria approved to accredit continuous medical education (CME) points to the participants of the AIDSFree Nigeria Training of Trainers program from the University of Calabar Teaching Hospital.

Trained health facility staff: In 2016, AIDSFree trained **1,885** health workers and **478** waste handlers in HCWM knowledge and skills in two local government areas (LGAs).

Supply chain strengthening: AIDSFree provided seed stock to 30 facilities in Cross River whose personnel had been trained on logistics for HCWM. This stock included 17,000 bin liners; 500 pieces of personal protective equipment (PPE)—boots, gloves, goggles, aprons, and facemasks; 150 waste bins; and 1200 safety boxes.

Opportunities & Rationale for Improved HCWM Systems

- Public-private partnerships (PPPs) for HCWM can lead to improved quality of health facility services, with **private sector investment** reducing the public sector burden and potentially creating job opportunities for residents.
- Health worker segregation of waste creates **opportunity for profitable municipal waste recycling** of non-medical waste, including glass, metals, and plastic.



- Smart investment of funds into coordinated health care waste management systems at the state level can **reduce the overall cost of waste management**.
- **Waste treatment equipment:** In Cross River state, there are six high-temperature incinerators: University of Calabar Teaching Hospital, primary health center (PHC) Ikot Omin, PHC Ediba, PHC Akim, PHC Ikor Ansa, and PHC Big Qua—this equipment could be utilized for multiple health facilities through a transportation network
- 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 **reduces 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.
- Safe working environment **attracts high-quality personnel** to the public sector and reduces “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 in Cross River state—38% of clinical service providers, 11% of officers-in-charge, and 9% of environmental health workers—reported needlestick injury in the last six months prior to the study.
- Very few (7%) health facilities have an **annual workplan** for HCWM.
- Most of the facilities (92%) have **no budgetary allocation for HCWM**.
- None of the facilities had an **annual HCWM activity report** for the previous year.
- **Unsafe open burning of waste** was prevalent in the health facilities. Open burning on the ground was the most common (52%) type of on-site disposal practice across the health facilities—including the tertiary facility observed. Open burning in a pit or enclosure (22.2%) was the next most common disposal practice across the facilities.
- **Waste segregation knowledge** is low—the proportion who correctly identified yellow as the color code for infectious waste was 22 percent of OICs, 37 percent of CSPs, and 25 percent of EHWs.

- The **use of PPE** by HCW handlers was poor across the health facilities—for example, only waste handlers at PHCs (and only 12%) wore overalls. Overall, waste handlers in 22.2 percent of health facilities wore boots.
- While all of the THFs had a designated **waste storage area**, only three-fifths of the PHCs and none of the SHFs have a designated area.

Threats

Need for state-specific HCWM policy: While the National HCWM Policy serves as a framework, a Cross River state-specific HCWM 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 Cross River 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 should be made to establish infection prevention and control committees within health facilities of all levels in Cross River state.
- Efforts should be made to develop facility action plans with supportive supervision to ensure ongoing efforts and results are evaluated for continuous improvement.
- Prioritize budgeting for HCWM commodities at the state level.
- Cross River state is encouraged to utilize the seed stock provided by AIDSFree and to continue ensuring that LGAs and facility management continue to procure essential 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 on HCWM for public and private health institutions 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 Cross River State Urban Development Authority and the Cross River State Waste Management Authority could pilot waste collection, treatment, and disposal in one LGA in Cross River, starting by transporting filled safety boxes using appropriate covered vehicle and conveying them to one of the five nearest high temperature incinerators.

Collaboration and Stakeholders—PPP Opportunities

The private sector companies operating in Cross River 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 include—but are not limited to:

- First Medical & Sterile Products
- Telecommunication companies (MTN, AIRTEL, GLO, Etisalat)
- Banks (Zenith, Guaranty Trust, Skye, Access, First Bank, Ecobank, Fidelity Bank, etc.)
- Large construction companies with international affiliation
- International oil companies.

Examples of potential partnerships include:

- Provision of HCWM commodities through PPPs to ensure the availability of safety boxes, color-coded bin liners to be distributed to all the health facilities.
- Development of a PPP for the collection, transport, and management of health care waste through a transport network utilizing existing high-temperature incinerators in Cross River state—further discussions are needed to identify 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>