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## AIDSTAR-One Success Story

# Recycling Plastics Health Care Waste in Central Uganda



AIDSTAR-One

Well-segregated plastic waste in a storage area in a hospital in Kampala, Uganda (awaiting collection).

***Engaging in plastics recycling activities reduces the amount of used plastic containers littered around the facilities, provides much-needed additional income, and nearly eliminates the open burning of plastic to improve the environment.***

### NOVEMBER 2012

This publication was made possible through the support of PEPFAR through USAID under contract number GHH-I-00-07-00059-00, AIDS Support and Technical Assistance Resources (AIDSTAR-One) Project, Sector I, Task Order 1.

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AIDS SUPPORT AND TECHNICAL ASSISTANCE RESOURCES

## Background

Black fumes used to rise from the incinerators operated by hospitals in and around Kampala, Uganda, polluting the air with cancer-causing chemicals and endangering local communities. The culprit? Plastics, which were routinely mixed with infectious hospital waste that required incineration.

As in other places, a lot of health care waste is generated in Uganda, which has a large and growing population and a high demand for quality health services. Much of this waste is made from recyclable plastic, including used infusion bottles, radiographic films, plastic medicine containers and caps, and bottles from water and soft drinks—with this last item accounting for about 13 percent of health care waste. When this non-hazardous waste is mixed with materials that have contacted blood or body fluids, it must now be reclassified as hazardous and be dealt with in the same manner as infectious waste. This makes safe waste management unattainable due to the large volume of material.

Although Kampala had a plastics recycling plant, plastics from hospitals were not being targeted for recycling due to a lack of awareness about the availability of recycling services and a lack of knowledge about the dangers of burning plastics.

## Intervention

In 2009, AIDSTAR-One (a U.S. President's Emergency Plan for AIDS Relief-funded project through the U.S. Agency for International Development) met with the proprietor of the Kampala plastic recycling plant to encourage the plant to collect plastic waste from hospitals within the central region. AIDSTAR-One/Uganda staff then took samples of available plastics to the plant to be evaluated for possible recycling. Ninety percent of the plastics presented were found to be suitable for recycling; these included bottles for infusion fluids, plastic cups and plates, and empty soft drink, water, and juice bottles.

AIDSTAR-One also organized awareness sessions for hospital administrators in the central region which included discussion on the benefits of collecting and recycling non-infectious plastics generated in the hospitals. Then, to enable the hospital administrators to act on their new knowledge, the proprietor of the recycling plant offered special containers for collecting plastics. For additional motivation, the recycling plant proprietor also agreed to pay the hospitals a small sum for each kilogram of plastic that was handed over.



Plastic waste being off-loaded at the recycling plant.

Each hospital selected a waste management focal person. This person was trained in waste segregation and then they spear-headed campaigns within their hospitals that targeted health workers, patients, patient attendants, and visitors, asking them to place all used plastics in designated containers. The plastics are collected from each participating hospital by a truck from the plastics recycling plant, which weighs the plastic for payment to the hospital administration. Most administrators use the fees they receive from the recycling plant to motivate waste handlers by giving them a bonus, and to procure protective gear for this cadre of staff.

## Outcome

Over 14 hospitals in Kampala are now collecting and handing over their non-infectious plastics for recycling. The black clouds of carcinogenic smoke that were endangering the community have been reduced. In addition, the

hospitals have not only reduced their costs of disposing of health care waste but they have even earned a small amount of money that they can use to protect and motivate their waste handlers.

Sister Ruth Nkwangu of Rubaga Hospital said, “The company that recycles plastics provides us with waste nets that we use for segregating the plastics. The plastics are directly picked up from our facility by company vehicles, and we are paid for each kilogram we hand over. Fifty percent of the generated resources are used to buy waste bin liners, while the other fifty percent is used to motivate the waste handlers.”

One district health manager said, “As you can see, the compound is very clean and fumes generated from the incinerator are much cleaner than before. The smoke emitted is colorless, while before, the neighboring community used to complain of black fumes polluting the environment.”

## Lessons Learned

In places with growing populations and high demand for health services, health care waste management can be a big challenge. Sometimes, private sector engagement—as demonstrated by plastics recycling in central Uganda—can help health facilities overcome these challenges and save the hospitals money.

Engaging in plastics recycling activities benefits hospitals by reducing the amount of used plastic containers littered around the compounds, and by providing much-needed additional income that can be used to protect and motivate waste handlers. Recycling also improves the environment because it nearly eliminates the open burning of plastic. This not only pleases local communities, but may help keep them from getting sick and further straining an already burdened health care system.

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The authors' views expressed in this publication do not necessarily reflect the views of the U.S. Agency for International Development or the United States Government.

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