

Reduce and Safely Dispose Health Care Waste Bertha Gxowa Hospital, South Africa

GGHH Agenda Goals

- Leadership
- Waste
- Pharmaceutical

Hospital Goals

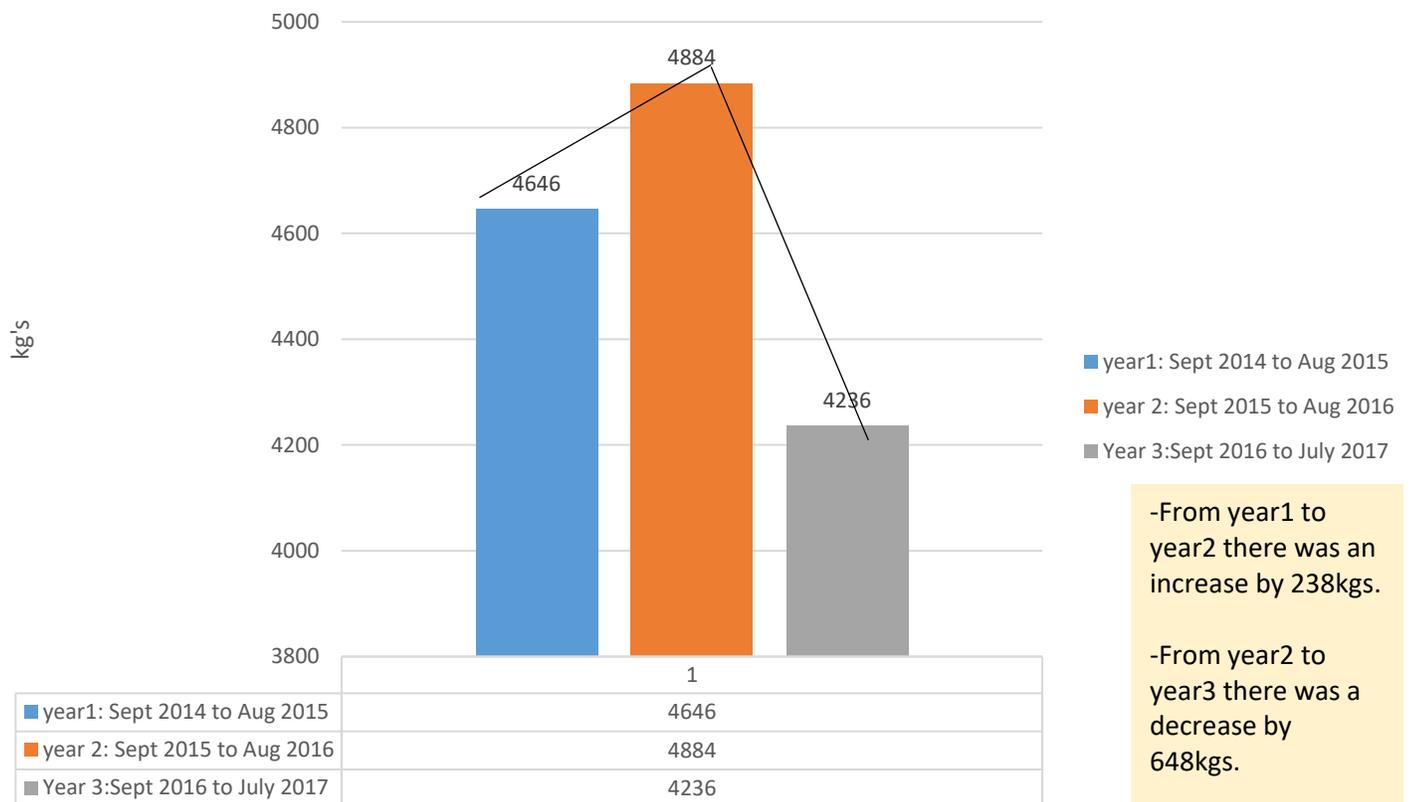
- To prioritize environmental health
- To promote environmentally friendly practices through the development of recycling projects that will significantly minimize the waste that goes to landfill and incinerator plants. An average of 1172.73kgs is diverted from landfill site per month to recyclables.
- To reduce the hospital environmental footprint.
- To educate patients and staff members on the safe disposal of expired and unused medication.
- To educate patients on safe disposal of insulin syringes in home settings.

Progress Achieved

- Became a member of the Global Green Healthy Hospitals Network in 2016.
- Risk waste has been reduced by 648kgs from an average of 4884kgs on previous year (sept 2015-Aug2016) to 4236kgs on current year (sept 2016-Aug2017).
- Improvement in waste segregation within the hospital.
- Staff accountability.
- Successfully appointed waste champions in various Units within the hospital.
- 100% Compliance with the National Core Standards for waste management (NCS Compliance Award 2014 & 2016).
- Eliminated unpleasant odours in the patient cubicles as infectious waste brackets were removed from patient cubicles.
- Staff members are more informed about the importance of waste management.
- Successfully conducted awareness campaigns.
- Awarded as the most efficient facility in Health Care Waste Management in Ekurhuleni and Sedibeng District (2016).
- Successfully initiated a diabetic insulin return program (Diabetic patients receive 8L sharps containers when they collect insulin from BGH Pharmacy Department and they return the sharps container during their next visit). The purpose is to ensure proper disposal of insulin in home settings. No proper recording and monitoring was done, therefore number of insulin containers issued does not correspond to the number received, as the number issued is more than the number received of which an estimation of about +-10 insulin containers issued only 3 is received back by the pharmacy department. (proper recording, monitoring and follow up to be done)

- Initiated a Medicine return initiative (Environmental health and Pharmacy Department Project).
- Successfully initiated recycling initiatives, to promote ZERO WASTE initiative for general waste. An average of 1172.73kgs is recycled per month.
- Financial benefits: The hospital has been able to generate revenue from recycling the recyclables that are generated by the hospital. An average of R410.6 is generated through recycling per month.
- Environmental benefit (the quantity of waste generated has reduced.)
- Human health benefit

BERTHA GXOWA HOSPITAL GENERATION RATES PER MONTH-TENDER PERIOD



The Issue

1. Health Care Risk Waste Generation rates were above the recommended generation rates of 4757.51 Kg as specified in the Tender proportion/service level agreement between Gauteng Health and Buhle Waste.

Increased Needle stick injuries from 2 to 4 reported cases per month associated with poor disposal of contaminated needles affecting medical staff members

2. Unpleasant odors in patient cubicles as medical waste containers were kept at the point of care.
3. Recyclables generated in the hospital were sent to the landfill site for disposal.

Sustainability Strategy Implemented

- Behavioral change is the most critical for ensuring sustainability of the health care waste management reduction system. To bring about this change, all the hospital staff members received orientation and training. Staff members in the pilot ward and other rolled out wards were involved in each and every step of the system implementation process.
- The waste reduction and segregation system was designed and initiated based on the findings from the waste management baseline assessment and also from the feedback from staff members.
- Induction of newly appointed staff members and continuous refresher trainings are done.
- Monthly monitoring of health care risk waste generation rates, including recycling.
- Training on safe handling of insulin sharps in home settings is done for patients that receive insulin in Bertha Gxowa Hospital.

Implementation process

Following the baseline assessment and feedback from staff members, a safe and sustainable health care waste segregation and reduction system was initiated at Medical A ward.

Advisory supported was provided by the Directorate of Health Care Risk Waste and Occupational Risk Management, Buhle Waste and the internal Maintenance Department for installing and removing damaged infectious waste brackets. Training and orientation was coordinated by Internal Environmental Health Practitioners, assisted by Geozone Environmental.

The design and implementation process was coordinated by Bertha Gxowa Hospital Environmental Health Practitioners. Staff members in the all the rolled out wards were involved to ensure ownership of the waste reduction and segregation system.

Bertha Gxowa Hospital focused in particular on behavioral changes in segregation practices and waste disposal practices.

PROCESS FLOW OF WASTE REDUCTION SYSTEM



From boxes to introduction of brackets



After Boxes were faced out, then brackets were introduced

Utilization of infectious waste boxes



Since brackets were falling due to heaviness of infectious waste especially in paed Ward and labour, then a reduction system was introduced whereby infectious red line is tied on the medication trolley



Utilization of brackets for infectious waste



RECYCLING INITIATIVES



Cardboard boxes awaiting collection for recycling



Mpac Recycling box for papers distributed on all units



Recycling of bread tags with interwaste company. In every 50kgs bread tags generated, the hospital receives a wheel chair

Tracking Progress

To monitor our progress, the Environmental health team witnessed every collection that is done by the health care risk waste service provider, to ensure that waste is weighed upon collection. The team also ensures that monthly health care risk waste generation rates are calculated using the manifesto slip and compare the generation rates with the quantity recorded on the invoice from the service provider before payment can be authorized. Weekly health care waste inspections and monthly audits are also conducted in the Units to monitor segregation practices. The progress achieved through the above mentioned strategies include:

- Waste reduction
- Improved Waste Segregation and
- Compliance with NCS

The patients that receive insulin sharps are requested to sign for receipt of the container and to bring the container with them when collecting their next repeat medication parcel. Based on the list that the Environmental Health Unit receive from Pharmacy we are able to monitor that patients receive and return the containers back to the facility. Based on the 100% ratio, about 20% of patients that receive insulin from the facility do return the sharps containers.

The medicine return initiative needs to be revived and new strategies should be put in place so that most of the patients that receive medication from Bertha Gxowa Hospital can also be encouraged to return medication to local clinics.

Through the recycling initiative the hospital has been able to generate revenue. The services provider also generates a spreadsheet that enables the hospital to monitor the progress.

Challenges and lessons learned

- It requires team work for a facility to have an effective waste management system.
- A health care waste management system should be piloted in one ward first before it can be introduced throughout the facility.
- Involve all staff members during the plenary and implementation process of the project.
- Appoint waste champions in different departments.
- Monitor and track progress to ensure that the goal of the project is achieved.

Next Steps

- To roll out the waste reduction system in all units within the hospital.
- To use food waste as compost.

Demographic information

Bertha Gxowa Hospital is a 328 bed Hospital with 328 usable beds with an average bed occupancy rate of 80% (norm 75-85%). There is an average length of stay of 4 days (norm 3-5 days). Outpatient's visits average is about 8440 per month. We are a satellite training centre for nursing and medical students.

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