

## Improving Waste Segregation and Recycling Mamelodi Regional Hospital

### GGHH Agenda Goals

- Waste

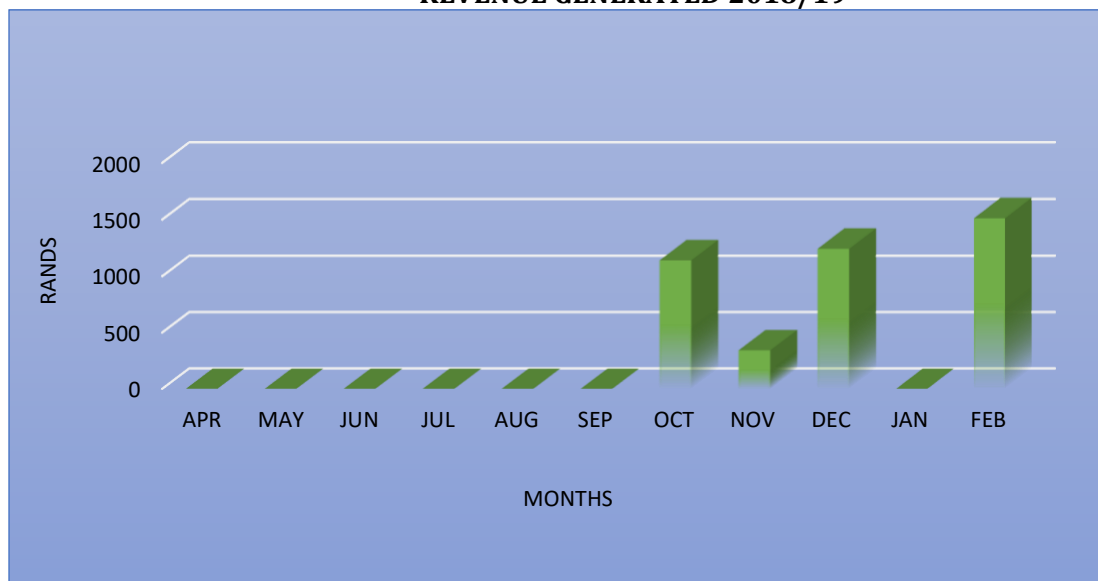
### Hospital Goal

- To reduce health care waste generated by the hospital.
- To ensure all staff and patients have sound knowledge of all processes and procedures related to proper health care waste.
- To reduce all greenhouse gas emissions related to health care waste handling.
- To have an onsite fully functional recycling station.

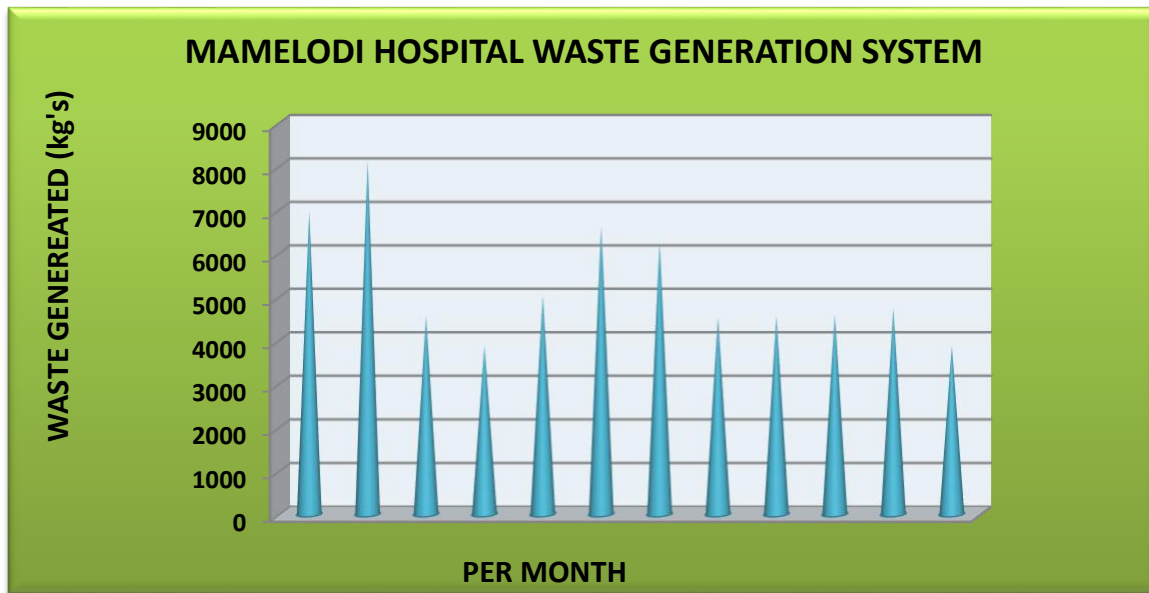
### Progress Achieved

- Financial benefits - through the recycling of boxes and office paper approximately R4000 (USD 280) was generated in the year 2018/19. The figures are increasing monthly.
- Environmental benefit- reduction of general waste. Implementations of paper less procedures in some departments have reduced the amount of paper used.
- Human health benefit- training hospital personnel including patients and visitor's education on proper waste segregation.
- Other quantitative results- exposure reduction, more satisfaction, reduced needle stick injuries.

**REVENUE GENERATED 2018/19**



## WASTE REDUCTION CHART 2018



### The Issue

Mamelodi regional hospital patient admission has exceeded its carrying capacity. Overpopulation is one of the main issues since the hospital covers patients from Mamelodi, Nellmapius, Eersterust, East Lynne, Cullinan, Pretoria East, Nkangala and Bronkhorstspuit. This increase of patients causes pressure on the staff which then contributes to poor segregation of waste due to units being very overloaded.

### Sustainability Strategy Implemented

- Behavioral change is most important for ensuring sustainability of the health care waste management reduction system. To ensure smooth implementation of change, all the hospital staff members received orientation and training. Training included prize winning to every individual who masters the skills of waste management. Having waste fun Fridays helped to make sure that all departments participated in the change being implemented in the hospital at large. Waste fun Fridays is when units are randomly chosen to compete in a waste management quiz with champion belt rotating to the relevant weekly champion.
- Induction of newly appointed staff members and continuous refresher trainings are done. Educational talks with some patients and visitors regarding waste management is also done, because patients and their visitors play a big part in waste segregation.
- Monthly monitoring of health care risk waste generation rates, including recycling
- Staff are also continuously looking in for new ways to reduce waste, especially medical waste.
- Some infectious waste material that can be treated within the facility.

### Implementation process

The implementation process started with a detailed presentation to the CEO about the intention to join GGHH. The presentation included what the core role of environmental health is in the facility and how GGHH can assist to meet the expectations from the Environmental department. After the presentation to the CEO there were follow-up meetings with relevant internal stakeholders discussing the plan of implementation for the recycling project. In the meetings a list of five different

service providers were identified to help support the progress of the project. The service providers were alerted to prepare proposal documents for the recycling of waste, which were

The internal stakeholders that were involved in the facilitation of the implementation process included the CEO, Deputy director: Admin & support, Environmental health, Occupational health and safety coordinator, Cleaning manager, Facility manager, quality manager, pharmacy manager and Finance manager. Communication had to be one of the major drivers e.g. Holding frequent fruitful meetings that discussed issues and way forward.

In the year 2017/2018 we had two major waste awareness events that aimed at educating the public and staff on the importance of proper waste segregation and how to reduce, reuse and recycle waste to ensure environmental protection. The awareness events were also a platform for the public and staff members to learn on how they can create extra income from recycling waste. Training on these topics is ongoing and is done monthly and on call to keep up the momentum. The recycling project in the hospital was piloted to a few departments and focused only on the recycling of boxes but then later it was expanded through all departments and wards of the hospital and not only focusing on boxes but also extended to the recycling of white paper, cans and plastic containers.

During the start and implementation of the project some people did not understand why the project was important and some people were complaining that segregating general and medical waste was not part of their job. However through trainings, the attitude towards waste is slowly changing in a positive manner. The project system is monitored monthly; however, the strategy is reviewed annually, and changes are made when there is a need or when the system no longer works or produces the desired results. In total from the start to the finish of the implementation process, it took about 3 months, even though there were challenges, but they were minor challenges and were handled internally, making the implementation process a success.

### **Tracking Progress**

The success of the project was measured tracking:

- The register that we keep for recording the amount of waste generated monthly
- The amount of revenue generated on a month to month basis is also an indication of the success of the project
- The reduction in waste going to the landfill

### **Challenges and lessons learned**

- To involve all stakeholders at all levels of the project and give feedback.
- Monitor and track progress to ensure that the goal of the project is achieved.
- Behavioral change takes time and requires patience.
- Medical waste is still a challenge and more trainings are needed

# RECYCLING makes a difference

**PAPER**  
mpact

**70%** of all paper products are recycled

**1.3 MILLION TONNES** of recyclable paper

mpact, has processed approximately **600,000 tonnes** of recyclable paper from PET bottles

**1 tonne** of recovered paper **SAVES 3m<sup>3</sup>** of landfill space

**7x** The number of times paper fibre can be recycled before they degrade

**150,000 PEOPLE** Employed by the forestry, paper and paper recycling industry. Recycling increases savings of waste collection, usually their only source of income.

**8000 ENTERPRISE RETAILERS AND COLLECTORS** Turned through mpact's Comprehensive Young People since 2005

**80 per cent** waste paper from **OVER 100** independent schools across SA

**150,000 households** (Waste sites of 11 schools, 11 towns and 11 universities) operating in the program

**464,000 CHILDREN** Number of children reached since the 2014 launch of mpact's Young People's Waste-Recycling schools programme

**1,900 mpact PAPER BANKS** At schools and community centres nationwide

**mpact HAS OVER 45 BUY BACK CENTRES IN GAUTENG ALONE** as part of a total of **1,000 COLLECTORS EACH DAY**

**R46 million** Income by suppliers to South Africa's recycling industry

**35,000 tonnes** of paper, cardboard, packaging and other pre-consumption waste



Recycling in action, above is one of our waste workers who collects boxes from all intermediate points in the facility and flattens them in the skip for weighing and collection.

### **Next Steps**

To strengthen our project we would want:

- Engage with green procurement to reduce waste such as. instead of packaging in boxes or plastics rather use the reusable containers/ Green procurement can prevent plastic pollution and aid to a healthier environment, improving customer satisfaction and reducing costs.
- To be a paperless facility/hospital. This will then mean that computers should be provided for all staff as well as work emails and proper running internet connection. A cost benefit analysis needs to be done as this is a systemic approach that looks at the benefit of implementation as opposed to the cost of the project.

### **Demographic information**

Mamelodi Hospital is located in Mamelodi, on the east of Pretoria. The hospital is divided into the old and new building. The old hospital was opened in 1981 which was a day hospital and the new hospital was then formally opened in 2010 which then started operating 24 hours. As a public healthcare facility, we provide secondary healthcare including emergency services, and we mainly serve the population of Mamelodi, Pretoria. The hospital has 325 beds, admits approximately 23 688 inpatients per year and attends to 120 000 outpatients per year. We perform about 4956 operations per year, which includes all types of amputations, optometry operations and maternity.

### **Links**

Main contact person information:

Email: Ayanda.Mdakane@gauteng.gov.za

Telephone n°: 012 841 0921

### **Other Contact person**

Phineas Nare = 012 841 0921

Portia Rakubu = 012 841 0965

### **Quotes:**

“The only limit to your Impact is your imagination and commitment, going green and committing to the projects can take you far as an individual and in your career” Dr Mabusela

**Submission date: 18/03/2019**