

An overview of the biomedical waste tracking software, King George Medical University, Lucknow, India.

Introduction

The biomedical waste software being used at King George Medical University has been developed to enable tracking of biomedical waste from the point of generation to final disposal. The software serves the 3100 bed Gandhi Memorial and Associated Hospitals of the University with 40 departments and over 300 waste generation and pickup sites.

BMW Sites in KGMU

Essentially there are two site categories

1. Waste generation and pickup site
2. Central Processing Facility

Users and their functions

The software is operated by the following users

Faculty Incharge

The Faculty Incharge is the Member Secretary of the biomedical waste committee and is responsible for the overall charge of the BMW system. The Faculty incharge is authorised to add wards and waste pickup sites to the software and add users to the system. In addition the Faculty incharge can generate all the required reports from the software.

BMW Nodal Officers

BMW Nodal Officers are also faculty members of the University and are responsible for the individual departments of the University where biomedical waste is generated. They oversee the proper segregation and transport of the BMW from their respective departments.

BMW Supervisors

BMW supervisors tag and check in the waste bags at the pickup sites by filling in the bag check in form tagging the bags with bar codes and scanning in the bags into the system.

Central Supervisor

The Central supervisors check out the bags at the Central processing facility and enter sales data into the software.

Biomedical Waste Categories

The software manages all the types of BMW generated in the hospital viz recyclable, incinerable and general waste. Various items are included in the recyclable waste such as plastic (syringes, tubes, infusion bottles) glass, rubber and paper all of which are sold at differing rates and managed by the software.

Processes

1. At the waste pickup site the BMW supervisor attaches a bar code to the waste bag with a zip tie, scans in the barcode in the bag entry form (using a laptop or netbook) and enters the simple details of the bag into the system (time taken is less than 1 minute per bag).
2. The bag is then transported to the Central processing facility where the central supervisor cross checks the bag weight and scans it out of the system for processing on site, or sending for incineration, or to be picked up by the municipal corporation (general waste).
3. Sale items (weight only) are entered into the relevant forms of the software thus keeping a record of sale quantities and revenue generated.

Reports

Time period specified reports are generated from the software as follows

1. Department wise and category wise waste generation
2. Total waste generation (category wise) for the entire hospital

3. Total sales reports
4. Item wise sales reports
5. Revenue Generated.
6. Pending Bags (which have not been logged out of the system).

Unique Features

1. The software can be customised fully as regards the users, reports and other featured.
2. It can work off of a web server or a hospital LAN with in house server
3. It can easily serve multiple hospitals of a healthcare delivery network.

Requirements

Computers and barcode scanners are required at the waste pickup sites and central processing facility.