



HOW MBAGATHI HOSPITAL WAS ABLE TO PREVENT DUPLICATION OF PATIENT IDENTIFICATION NUMBER TO IMPROVE QUALITY OF SERVICES

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SECTOR	HEALTH
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CONTEXT AND CHALLENGES

Mbagathi District Hospital is a public health facility founded mainly by the Kenyan Government. It's situated in Kenyatta Golf Course location, Lang'ata sub-county in Nairobi County. The hospital was originally known as "infectious Disease Hospital" (IDH) under the then "King George vi Hospital", currently Kenyatta Hospital. Mbagathi was built in the years 1950s to offer health services, mainly diseases which required isolation such as tuberculosis measles, meningitis and leprosy. In 1995, IDH was curved from Kenyatta National hospital and transformed into an autonomous District Hospital for Nairobi, though with poor and dilapidated facilities. Because it is located within the city of Kenya, the hospital serves a population of more than 3 million people. As a provider of comprehensive HIV/AIDS care and treatment, Mbagathi is a recipient of public funding and a key health facility in Nairobi on HIV/AIDS care. It also receives support from the international donor community including the Clinton foundation. The hospital offers VCT, PITC, DTC, and PMTCT services, as well as TB care and counseling among other services. The clinic is staffed by personnel from the Ministry of Health. The hospital has 5000 adults and 500 children on antiretroviral therapy and provides 150 consultations daily.

However, for a long time, Mbagathi Hospital received lots of patient complaints about poor service. One recurrent complaint was about patients having similar registration numbers, which brought frustrations and confusion in patient care, and led to wrong billing, wrong results being given to wrong patients, and an overall poor patient experience while in visit to the hospital. The system also slowed the services because the health practitioner had to spend most of her or his time confirming the right number for a particular patient leading to slowed work rate. Due to these regular complaints, the hospital administration looked into the problem and established that the duplication or giving same number to

different patient was due to reliance on a manual system, work overload for staff and human errors. It was decided that a solution needed to be adapted to resolve the problem.

RESPONSE AND ACTIONS

- The hospital administration received support from the Nairobi County government to reform the patient registration system at Mbagathi. Through the county government, the hospital purchased computers and a software system for patient management.
- Setting up the infrastructure: Computers with the new software (Dormax Hospital Management System) were installed in every department - casualty, Consultant rooms, Lab, X-ray and Billing.
- The Dormax system installed in the hospital registers new patients and updates records of patients who have already been reflected in the system.
- The system allows the patient to use one unique identifier number within all departments in the hospital, making it easy to follow up patients and to retrieve their records.
- The county government also purchased a backup power system in the form of a generator, to ensure that the system was dependable and could run throughout with minimal disruption.
- Staff running the system were trained on how to operate it successfully. The county government supported the hospital to conduct the training, and support staff to overcome challenges related to fear of technology and desire to run the old manual system.

To protect the system's integrity, the hospital administration assigns different levels of access to patient information and restricts the operations the health practitioner can perform.

How Dormax Hospital Management System Works

1. DISCHARGING <ul style="list-style-type: none">• DORMAX will reduce discharge time from the current 3 hours to 20 minutes by auto billing of all services available no billing clerks required• At registration, all patient biodata and NHIF status is checked before admission including fingerprints	2. LONG QUEUES <ul style="list-style-type: none">• OP Module has a queue management system integrated which will enable easy retrieval of patient files and reduce movement per station• System enables management to set KPIs for time taken for patient per station
3. DIAGNOSTIC REQUESTS <ul style="list-style-type: none">• All Lab and imaging requests will be done electronically unless otherwise and this will increase revenue• DORMAX has an elaborate lab management module that will reduce wastage, all lab machines to be integrated	4. REPORTS <p>Many reports will be pushed via email to relevant functional teams. DORMAX has a powerful reports hub where all reports can be retrieved easily</p>

OUTCOME AND RESULTS

The new system is now fully functional and the benefits are already being witnessed, with less personnel required to run the registration and records retrieval service, freeing more staff to attend to patients. This Dormax service prevents duplication to a 99% and the institution runs the process very smoothly. Other outcomes being observed as a result of the reforms include the following:

- The hospital is now able to register more patients in a day, an average of 603 patients in a day;
- There has been a reduction of staff members managing registration. Now only two staff members are required to serve the 600+ patients who register for services daily.
- It is now easy to generate patients' reports, as the system can quickly generate reports of under-five and over-five paediatric patients, males and females, and adults with just a click of a mouse.
- Improved patient care has been reported – with the genuine unique identifying number given to a patient, all notes and lab results and other data regarding the patient is available to the attending healthcare staff, making it easy to coordinate treatment and track patients for more follow up care.
- The system allows for easy registration of emergency patients and thus immediate patient care. With fast registration, the emergency patient get improved care.
- Although the service providers can view and easily retrieve the patient data, the data is secured to protect integrity.

Challenges faced:

The adoption of the new system has faced some challenges, which the hospital continues to address. These include the following:

- The advent of the system made some staff redundant, because now fewer, more skilled members were needed to run it.
- Cost of equipment: there was need for a computer in every department, which, along with the software, made the project costly
- Need for power backup; there was need for power backup which could be reliable all the time.
- Need for an IT department: The hospital needed to set up an IT department to support the system and handle the maintenance of the hardware and software.
- Resistance to change: some staff were resistant to change from paper records to the electronic system

LESSONS LEARNT

The running of the previous and current way worked very well since where the old one failed, the new one is working. Other county hospitals can learn from Mbagathi about how to reform systems and bring change in operations successfully, including how to manage unsupportive staff. A digital registration system is recommended, but it requires persistence and great push to meet the needs of a health

institution. Mbagathi has learnt that it is important to monitor the system, as prices for services can be manipulated from the system and registration fee raised by an individual to exploit of patients.