

Upgrading Amana Hospital's medical records system to enhance patient origin tracking

Small but mighty tweaks to a major hospital's electronic health information system (eHIS) are helping clinical staff to more accurately track where patients come from—making it easier to locate disease outbreaks and manage care.

BACKGROUND

Dr Omari Mahiza is a Pediatric Doctor at the Amana Regional Referral Hospital. Located in Ilala District, Amana Hospital is one of the region's largest health care providers, serving 300,000 patients a year (including those coming from neighboring districts like Temeke, where HIV/AIDS prevalence is among the highest in the region). This places a heavy burden on the Dr. Mahiza and his colleagues, who must track and coordinate care given to patients across the hospital in order to deliver quality health services. Among the information about patients that doctors and nurses rely on is their physical origin—that is, the geographic area they come from. This information can help medical professionals at Amana Hospital to plan their care, isolate potential outbreaks, and more.

PROBLEM

Through conversations with nurses and registry staff, Data Zetu partner Humanitarian OpenStreetMap Team (HOT) learned that there is no systematic method or process for registry staff and nurses to collect this patient origin information easily. Current practices of asking a patient 'where they are coming from', and simply recording whatever answer is given, has resulted in an arbitrary column of random location data that sometimes indicates a ward but other times shows a subward, or even just the region of Dar es Salaam.

Data collected in this manner is not useful to clinical staff or community health workers who could use data, if accurate, to track and monitor diagnoses and, when necessary, conduct active case finding to locate a specific patient or source of an outbreak. Additionally, these professionals have not received training on how to properly record patient location data during registration, resulting in low perceived value or importance of doing so.

SOLUTION

The Data Zetu team, led by HOT, helped Amana Hospital to update their electronic health information system (eHIS) to help hospital staff register information about patients' geographic origin (the ward and subward), as well as their shina (the most hyperlocal administrative boundary, mapped for the first time in

The updated User Interface at Amana Hospital enables registry staff to record patient location data using drop-down bars, instead of manual fields, for one's specific ward, subward and name of local leader.

Tanzania by HOT as part of an earlier Data Zetu effort), and mjumbe (shina leader) of patients. These fields are pre-populated with the names of each ward, subward, and mjumbe.

PROCESS

In May 2018, a working relationship between Amana Hospital and Data Zetu was established and the HOT team with Dr Mahiza at Amana conducted a week-long embedment exercise, where HOT staff were stationed in different hospital departments to observe processes and behaviors. The team saw the opportunity and need to more systematically recording patient location data into the eHIS.

Drawing from HOT's existing citizen-generated data,¹ the company managing the eHIS added the names of all 31 wards and 148 subwards within the hospital's catchment area to the eHIS. The team also conducted mapping efforts of shina boundaries across all the entire catchment area—as well as the mjumbe (or hyperlocal official) for each—for GPITG to add into the system. Once the updates were deployed, HOT returned to Amana Hospital to provide stand-by support to nurses and registry staff as they began using the system to record patient location data more systematically using the new fields, features and data.

Simultaneously, the Data Zetu team designed and delivered training sessions to registry staff and nurses at Amana Hospital about the value of maps and location data to enhance population health, such as a role-play exercise for participants to highlight and discuss the challenges and barriers hospital staff face during the registration process when asking for a patient's details.

The final step (in progress) is to deploy and embed a dashboard into the existing eHIS that will enable clinical staff to monitor and track patient data in real time.

OUTCOMES & IMPACTS

“What used to take months, now takes seconds. Our nurses and doctors are now able to go back to their important work of providing health care, instead of spending so much time looking through documents to find information.” –Dr. Omari Mahiza, Pediatrician, Amana Hospital

Creating more precise location data for greater impact: The modified eHIS at Amana Hospital will enable Dr. Mahiza to *“keep track of ‘red flag’ symptoms and diagnoses—and their locations—in real time, allowing for immediate deployment of hospital-based community health workers to conduct active case finding which, during a disease outbreak or emergency, could be life saving.”*

Providing capacity-building to Amana Hospital's data stewards: The training provided to nurses and registry staff led them to gain a greater understanding of their role in the hospital's



Doctors and nurses at Amana Hospital explore how assigning hyperlocal areas to patients could help in improve health care and identify patterns.

¹ This data was drawn in part from Data Zetu's community efforts and also from Ramani Huria's efforts. Learn more here: www.ramanihuria.org

record-keeping processes. Through discussions on how diseases spread and the value of location data to prevent the spread, participants learned the importance recording patient details accurately and systematically. From our surveys, we've learned that participants left the training with a greater sense of ownership over data collection at Amana Hospital:

“Through the training, I learned the importance of taking the correct information from a patient visiting the hospital - it is necessary to properly and seriously take a patient’s address [name of mtaa and mjumbe], since it will be easier to find a patient in the case there is a need to do so”.

KEY COLLABORATORS



Amana Hospital, Ilala
District Council



**DATA COLLABORATIVES
FOR LOCAL IMPACT**



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