Applying Process Improvement on a Rural Clinic’s Medical Record System (MRS)

Our MIT team assisted Chebaiywa Health Center (CHC) by developing an implementation roadmap for a MRS that will allow them to track their patients and improve care.

Founded in 2000 as a dispensary, Chebaiywa Health Center (CHC) is a medical mission facility that provides healthcare to the underserved in rural Kenya. The health center’s services include treatment, optometry, dentistry, maternal health, as well as a laboratory and a pharmacy. As CHC’s services and patient base have grown, the clinical staff has identified a need to implement a medical record system to improve the quality of patient care and better track their patients. The staff specifically requested ghdLAB to help them launch OpenMRS, an open-source electronic medical record system platform.

Before our arrival in Kenya, we researched the challenges and success factors associated with implementation of OpenMRS. We found that successful implementation requires at least 3 months, long-term software support, software proficiency, seamless integration into daily workflow, and contingencies for electricity outages.

Once on-site, we observed and interviewed the staff in order to assess the feasibility of launching OpenMRS with these factors and challenges in mind. We found the clinical staff was very excited about the future of CHC with hopes of growing the facility into a hospital. Our study recommended that CHC should first implement a physical medical record system and that OpenMRS could be an option in the future after further infrastructure improvements.

**Immediate Action:**
- Alphabetical filing
  - Minimize patient waiting time
  - Reduce administrative work
  - Majority of cost already incurred
  - Reliable backup for future electronic systems

**Near-term Action:**
- Electronic MRS via Excel
  - Keep all the records in one place
  - Quick, easy to locate past records
  - Leverage staff’s computer skills

**Long-term Strategy:**
- OpenMRS
  - Establish a comprehensive electronic MRS with customized interface that best fits UPEC CHC’s needs
  - OpenMRS software is recommended
  - Need to address the following issues before roll-out:
    - Electricity outage
    - Capacity in IT personnel and hardware
    - Funding (for infrastructure build-up)
    - Software limitations (e.g. program bugs)
    - Lack of good online guideline / documents

David Hilliard has worked for eight years with The Boeing Company and is completing his MIT Sloan MBA in 2012, after which he will return to Boeing and work on the new 787 aircraft. Find him on LinkedIn.

Thapana (Pipe) Chairoj has several years of experience in investment banking, and is completing his MIT Sloan MBA in 2012. Find him on Facebook at “Pipe Chairoj.”