CASE STUDY

Delivery Optimisation for Antiretroviral Therapy (DO ART)

Overview

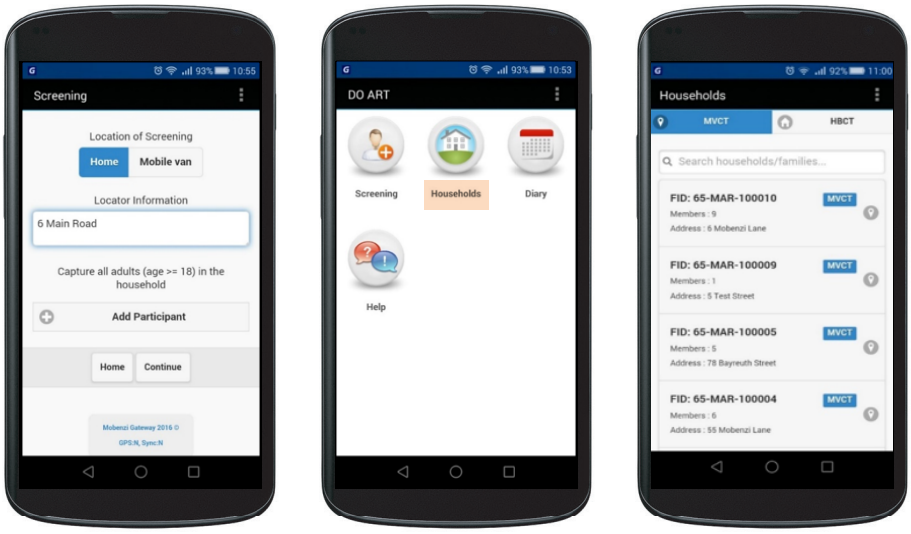
ART has great potential to prevent HIV associated morbidity, mortality and transmission. However, it requires reliable ART supply and monitoring of an already overburdened health care system. First-line ART regimens have simplified considerably over the years, making community-based ART delivery a feasible alternative to clinic-based delivery. South Africa and Uganda plan to provide decentralised services, including community health workers (CHWs), to meet the challenge of scaling up ART using the existing heath care infrastructure.

The DO ART study is a randomised control trial conducted by the University of Washington and funded by the Bill and Melinda Gates foundation which runs over approximately 24 months. The study aims to compare and evaluate the impact and cost of community-based ART initiation and re-supply in order to better understand how to maximise the number of HIV positive persons reached while minimising the cost to do so.

Working closely with community members, stakeholders, local providers, and the local Department of Health (DoH), the study aims to integrate the community-based ART delivery with HIV clinics, pharmacies and labs. Due to the intricate nature of the trial, including unique interventions for each arm, a project of this scale and scope would be near impossible without a sophisticated, digital solution that allows for automated workflow and protocols.

Mobenzi Implementation

Leveraging the Mobenzi platforms, approximately 23,000 participants of 18 years or older from Uganda and South Africa are screened and tested for HIV in either their home (HBCT) or at a mobile van (MVCT). Of the 23,000 adults who consent to screening and testing, approximately 1,800 are expected to be clinically stable, HIV-infected adults who have not yet initiated ART treatment. This group is offered enrolment into the study, and randomised into one of the three main study arms (Arms 1 to 3).



In the Household module, all screened households are listed under the relevant tab

Each arm will receive an ART regimen:

- **Arm 1:** Home ART initiation; Mobile van ART monitoring and resupply
- **Arm 2:** Clinic ART initiation; Mobile van ART monitoring and resupply
- **Arm 3:** Clinic ART initiation; Clinic ART monitoring and resupply

Over a 12-month period, enrolled participants receive regular follow-up visits and/or symptom screening calls, depending on the participant's arm. At each follow-up timepoint, the relevant research surveys and required point-of-care testing forms are made available via the Mobenzi mobile application, prompting the fieldworker to capture the relevant information.

The Mobenzi Researcher mobile data collection plugin allows for substantial surveys with built-in skip logic and branching, including the capturing of GPS locations and the scanning of lab sample bar codes to be captured. With the help of Mobenzi ID - a biometrics plugin which enables a standard fingerprint scanner to be connected to a fieldworker's mobile device - participants are uniquely enrolled using their fingerprints, enabling later verification when collecting medication.
The Mobenzi mobile application further assists field teams by scheduling visits according to predetermined protocols. Neutral reminder SMS messages are sent out to participants prior to the scheduled date of a follow-up visit. SMS messages are also sent to provide participants with non-specific information regarding their test results.

The Mobenzi web backend is responsible for longitudinal record-keeping. It generates several web reports, providing a near real-time overview of screening and enrolment numbers, progress made in terms of follow-ups and completed milestones, household information, data collection schedules, and adverse events reported by fieldworkers. Lab sample results are directly merged into the system and, together with a record of all milestones completed and scheduled, are made available on each participant's individual profile.

Impact and outcomes

The DO ART study will determine whether community-based ART delivery is more effective, safe, acceptable and cost-effective than clinic ART delivery. The Mobenzi system facilitates the direct comparison of the viral suppression and cost of using the two different approaches which will aid in proving whether community-based strategies for ART resupply and monitoring is a viable, and in fact preferable, way to improve health outcomes and reduce the burden on clinics.

UNIVERSITY of WASHINGTON

BILL & MELINDA GATES foundation

Mobenzi®

www.mobenzi.com

References and further reading:
http://mobenzi.com/researcher/Case-Studies