CASE STUDY

Mobenzi OUTREACH Mobenzi RESEARCHER

ACT3 Randomised Control Trial

The Woolcock Institute of Medical Research (WIMR) of Sydney University, Australia, specialises in respiratory and sleep research.

Since 2009, they have partnered with the National Tuberculosis Program (NTP) in Vietnam on several initiatives which aim to improve the respiratory health of the Vietnamese population.

ACT3 (Active Case-finding in Tubercolosis) is a 4 year longitudinal, randomised control trial in Cau Mau, Vietnam, which aims to monitor TB prevalence and the extent to which this is affected by early diagnosis and referral for treatment. It is one of the largest projects to date which has utilized Mobenzi platforms in managing all aspects of data collection, operational logistics, data integration and reporting.

CHƯƠNG TRÌNH CHỐNG LAO QUỐC GIA BỘ Y TẾ

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Further Reading:

Access more Mobenzi case studies at http://www.mobenzi.com/researcher/case-studies

MOBENZI IMPLEMENTATION

Mobenzi Researcher is used as the mobile data collection platform with the Mobenzi Outreach platform added to support the custom workflow, longitudinal record-keeping and web interfaces.

In years 1 to 3 of the study, approximately 60 000 adults in 60 intervention villages will be visited at their homes, screened via an interview and asked to produce a sputum sample. Each fieldworker is equipped with a password protected Samsung tablet with the Mobenzi application installed. This is used to capture interview data and scan QR codes assigned to each specimen collected. The device transmits data in real time to a central server, where a longitudinal participant record for each resident is maintained in Mobenzi Outreach, a Mobenzi web-based platform.

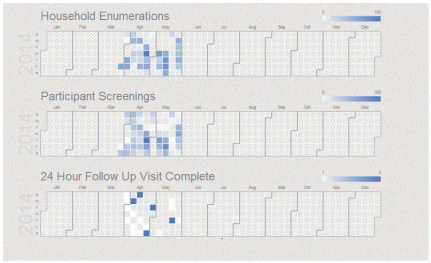
The screening sputum samples are transported to a lab in Ca Mau where they are checked in as received by lab technicians who scan the QR code. During this process, a screen prompts the lab technician to capture the quantity and colour of the sputum samples to determine if they are sufficient for Gene Xpert testing. Participants who test TB positive on the Gene Xpert machine then receive a follow up visit (ideally within 24 hours) where they will be given their results and referred for treatment as well as asked to provide a further blood sample, X-Ray and 2 sputum specimens for confirmatory testing. Another follow-up is scheduled 9 months later to determine the outcome of each referral.

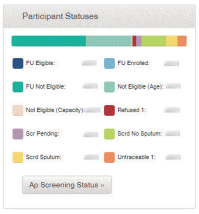
These follow-up forms which appear on the mobile devices are dynamically generated based on the results received at the lab. When the Xpert result is available, this is captured by lab staff into a web interface and as soon as a positive TB result is recorded, the system sends the correct interview forms to the fieldworker assigned to the participant's village. The form includes contextual information such as address and test results, thereby assisting in communication between the lab and field.

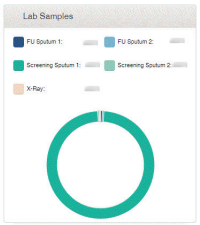
In order to facilitate data collection, management staff members access a web interface where they can assign field staff to villages, ensuring that the surveys, test results and notifications for each village are sent to the assigned fieldworker's device.

In year 4, the same procedures as years 1 to 3 will be completed in the original 60 intervention villages as well as 60 control villages. In addition, a blood test to detect TB infection will be performed in children of school entering age in all villages. This will enable a comparison across intervention and control villages on the adult prevalence of culture-confirmed pulmonary TB, and TB infection in children of school entering age, with a view to measuring the impact of the early diagnosis and treatment on lowering the burden of TB in Vietnam.

The customised web-based dashboard configured in Mobenzi Outreach provides a graphical overview of the study giving real-time feedback on key indicators such as household enumerations, participant screenings and 24-hour follow up visits that have been completed or which may be overdue. The lab samples can also be easily monitored from this interface allowing project managers to track whether they are in transit, received or resulted. In addition to the core functionality summarised above, multiple user roles are also supported in order to manage the levels of access to view and edit information.







ADDITIONAL FEATURES

In order for fieldworker training to occur when needed without interrupting live data collection, Mobenzi has configured a training environment on the mobile device which mirrors the study's forms and functionality, but stores any data captured as 'test' data which is separated in all reports and management screens as well. This is especially useful in longitudinal studies that can see the coming and going of staff over time.

ACT3 is also one of the first studies to utilise Mobenzi ID, allowing the capture and storage of fingerprints. These are stored for each participant during screening each year, ensuring data can be linked for each participant over multiple years of participation in the study.

The Mobenzi team offers sophisticated remote support to the team in Vietnam, cutting out potential travel costs.

KEY ADVANTAGES

In choosing a customised system that supports the ACT3 study from end-to-end, the team in Vietnam can experience seamless integration between data collection, lab operations and analysis in real time, as well as comprehensive support from Mobenzi as the study progresses.

Mobenzi

www.mobenzi.com