

# Smartphones Help Improve TB Care in Nigeria

## OVERVIEW

The use of smartphones in Nigeria to collect data on tuberculosis has eliminated the need for printed forms, minimized human error in data entry, reduced the lag time for getting data to policymakers and managers, and helped pinpoint ways to improve delivery of care.

Health Systems 20/20, in collaboration with the National TB and Leprosy Training Centre (NTBLTC) in Zaria, piloted the use of smartphones by supervisors to improve supervision of TB treatment, diagnosis, operational procedures, and data reporting at the facility- and local-government levels. Supervisors conduct visits on a monthly or quarterly basis at facilities to provide comprehensive monitoring of all clinical, commodity, and laboratory functions related to TB care in Nigeria.

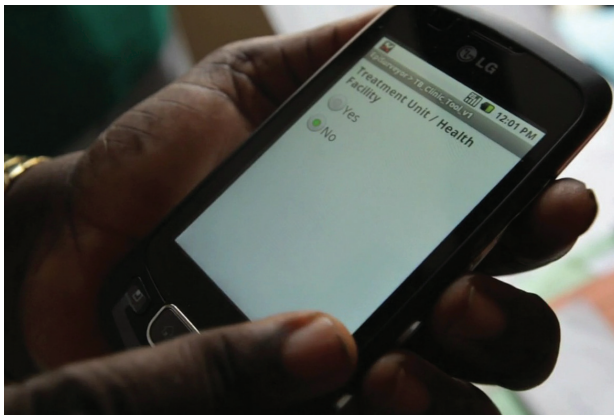


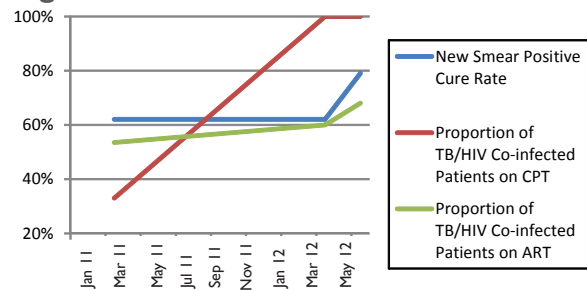
Photo: Oluwaseun Adeleke

*State Supervisor Akinbola collects data during a visit to the Ikeja Local Government TB/Leprosy Centre in Lagos.*

## IMPACT

After several rounds of supportive supervision utilizing smartphones over the last two years, states report substantial improvements in major areas of TB care including cure rates, TB/HIV co-infection treatment, and defaulter rates.

### Improvements in TB Outcomes in Lagos Mainland 2011-2012



In Lagos Mainland local government area, for example, the proportion of TB/HIV co-infected patients on cotrimoxazol preventive treatment (CPT) went from 33% in March 2011 to 100% in March 2012 and has stayed at 100% as of the last supervisory visit in May 2012.

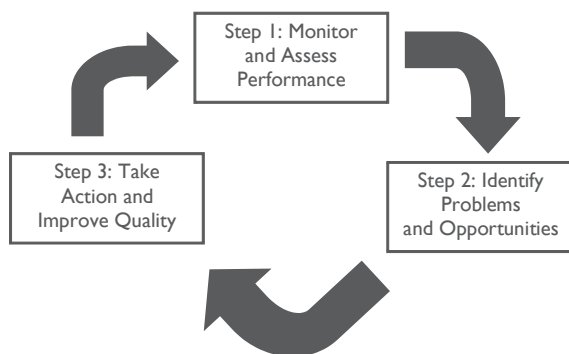
At the same time, the proportion of TB/HIV co-infected patients on anti-retroviral therapy increased by 27% between March 2011 and May 2012 (from 53.5% to 68%). Likewise, improvement in the new smear positive cure rate rose from 62% in March 2011 to 79% in May 2012.

## FEATURES

Smartphones enable better data sharing capabilities and easier analysis on the phone, allowing quality improvement (QI) plans to be made on the spot during a supervisory visit to a health facility.

The phones utilize a TB supervision checklist that was developed in collaboration with the NTBLTP. Not only does the checklist consolidate numerous existing checklists that were repetitive and paper-based, but it also ensures that the way TB services are assessed are uniform and comparable. Automating the checklist allows supervision to go beyond monitoring to provide immediate calculations and analysis of data during the supervision visit, making it a three-step process for QI.

### Revised Supportive Supervision Process



Given its success, the pilot was scaled up to over 200 facilities. The use of the smartphone allowed datasets to be sent with a SIM card to a central database that could be reviewed and monitored by managers at all levels of the health system. The phone-based supervisory tool not only improves quality at the facility level but informs policymaking and resource allocation at the state and national level.

*“The tool has been very useful. It has made our work easier in the field. In the past, we used a paper-based checklist which can be cumbersome and you cannot really give immediate feedback. With the tool you can give and get responses on the spot.”*

— Mr. Kehinde Jimoh, Scientific Officer and Trainer at NTBLTC

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Health Systems 20/20 is USAID's flagship project for strengthening health systems worldwide. By supporting countries to improve their health financing, governance, operations, and institutional capacities, Health Systems 20/20 helps eliminate barriers to the delivery and use of priority health care, such as HIV/AIDS services, tuberculosis treatment, reproductive health services, and maternal and child health care.

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