

Working Through Motorized Campaigns to Overcome Pandemic-Related Barriers to Tuberculosis Service Delivery

Background and Context

Nigeria has one of the lowest rates of tuberculosis (TB) case detection in the world, reported at only 24% in 2018.¹ To deepen its understanding of why TB cases were hard to find and what influenced a person's TB care-seeking behavior, Breakthrough ACTION-Nigeria collaborated with National TB, Leprosy, and Buruli Ulcer Control Programme (NTBLCP), state, and other partners in 2019 to learn about community members' experiences with TB-related behaviors and apply them to program design. The project used a human-centered design approach to answer the question, "[How might we increase TB case detection rates in Nigeria?](#)" The activity identified social and behavioral factors that influence why and how community members choose to access TB services.

Over the years, efforts in Nigeria to address TB primarily focused on improving services, but the service delivery side is only part of the solution. A multitude of social and behavioral factors—such as perceived susceptibility, perceived severity, perception of available health services, confidence in one's ability to seek services, and TB-related stigma and discrimination—influence community members' decisions on if, when, and where to seek TB testing and treatment. The Government of Nigeria has prioritized seeking strategic, evidence-based social and behavioral change (SBC) interventions to help improve TB case notification rates.

During the COVID-19 pandemic, the Government of Nigeria required that patients diagnosed with



COVID-19 be isolated from family and friends. Given TB and COVID-19 symptoms, such as cough and fever, are similar, community members were afraid to go to facilities for TB testing in fear of being diagnosed with COVID-19 and isolated. Rumors and stigma associated with COVID-19 further alienated people with TB from going to facilities to be diagnosed or treated. This potentially threatened the gains that had been made in TB case notification. In addition, some communities did not use health facility services because of their lack of accessibility.

¹Nigeria—Tuberculosis case detection rate (All forms). (n.d.). Retrieved October 25, 2023, from <https://tradingeconomics.com/nigeria/tuberculosis-case-detection-rate-all-forms-wb-data.html>

The Intervention

Prior to the COVID-19 pandemic, Breakthrough ACTION–Nigeria utilized a number of community outreach approaches to engage with community members in public settings. During the pandemic, however, public gatherings were not allowed. These constraints led Breakthrough ACTION–Nigeria to conceptualize motorized campaigns as an innovative way to reach communities with information about TB. The campaigns could also take screening and testing services to the people so they would not have to go to the health facility for TB services.

In partnership with service delivery implementing partners and State TB and Leprosy Control Programs (STBLCP) and guided by data, Breakthrough ACTION–Nigeria developed a plan to reach out to communities they identified as TB hotspots. They wanted to bring their campaign to where the people were, share information about TB, and provide simultaneous TB services using a “hype” vehicle equipped with a sound system and branded logos from Breakthrough ACTION–Nigeria’s “Check Am O!” TB SBC campaign. The project conducted prior community engagement to prepare the community gatekeepers for the activity.

During a motorized campaign, a hype vehicle enters a community and plays music interspersed with pre-recorded TB jingles to attract attention. Mobilizers then go on foot to engage in-depth with community members one-on-one about TB, sharing pamphlets, answering questions, and making referrals. Service delivery partners also establish a fixed point for TB testing in the community, so people with symptoms suggestive of TB can get appropriate referrals, testing, and treatment.



“ So the motorized campaign actually helped those kinds of people who cannot access those facilities [...]. With the motorized campaign, the project was able to reach wider audiences and difficult to reach communities and terrain [...]. We would drive our vehicles to those points.

- **Cecilia Kafran**, Breakthrough ACTION-Nigeria, Assistant Program Officer, TB

Implementation Story

Motorized campaigns emerged as a way to ensure continued engagement around TB testing, increase the reach of TB SBC interventions, and adhere to the COVID-19 restrictions. Breakthrough ACTION–Nigeria state teams obtained the buy-in of local community-based organizations (CBOs), STBLCPs, TB service delivery partners (including Sustaining Health Outcomes through the Private Sector Plus, KNCV, and Institute of Human Virology (IHVN)), and additional stakeholders on the concept of motorized campaigns.

The team determined priority locations for the motorized campaigns using the Early Warning Outbreak Recognition System (EWORS) by KNCV or the Epidemic Control Systems (EPCON) by IHVN. EWORS and EPCON use advanced surveillance mechanisms to detect early disease outbreaks. The two applications use Artificial Intelligence through electronic collection and analysis of routine clinical and nonclinical data to identify the likelihood of the occurrence of a disease outbreak in a given geography. Once Breakthrough ACTION–Nigeria identified the locations, it worked with community leaders to keep them informed of the upcoming initiative, get their support, and work with them during the motorized campaigns.

Project staff and partners oriented community mobilizers and town announcers on TB, including the signs and symptoms of TB, how to screen for TB using World Health Organization guidelines, and how to refer people with presumptive TB for free TB testing. They selected mobilizers based on their familiarity with TB and the communities they were to work in. Some are members of local CBOs.

During the motorized campaigns, the community mobilizers and TB Local Government Area (LGA) Supervisors (TBLS) traveled in the hype vehicle playing TB jingles interspersed with appropriate music for the location. This generated excitement, educated the people through a public address system, and encouraged community participation. The jingles described TB signs and symptoms, and the project tailored music to local preferences (for example, religious music, Nigerian music, or international music). Through the jingles, people who were experiencing signs and symptoms of TB were encouraged to come to the vehicle for testing and were provided information on the screening and testing services. Other community mobilizers and the TBLS walked around the community, talking one-on-one with people, encouraging them to get tested if they or someone they know had TB symptoms, handing out TB SBC materials, and sharing referral slips if someone had TB symptoms. While the vehicle's "buzz" drew many community members outside, community mobilizers also obtained permission to enter people's homes for further discussion. The vehicle and mobilizers also promoted the national TB hotline number, 3340, which people could call free of charge to learn more about TB or find a TB testing location near them. The hotline referral aided community members who were reluctant to discuss their concerns.

A key element of the motorized campaigns was the simultaneous provision of TB services at a fixed location in the community. Community members with TB symptoms could go for immediate screening and testing. The type of services provided varied depending upon the partner supporting the provision of services. KNCV, for instance, used their Wellness on Wheels (WOW) trucks or Wellness on Keke (WOK) tricycles whenever possible. The WOW trucks are equipped with testing resources, including AI-enabled mobile chest X-rays and GeneXpert machines. WOKs, which are able to reach deeper into the communities given their small size, have portable backpack chest x-ray machines and battery-operated machines (Truenat). Both WOWs and WOKs were branded with "Check Am O!" logos or banners. In other settings, IHVN and other implementing partners or the local health facility would establish a TB screening point in the community, collect sputum samples, transport them to the health facility for testing, and later follow up with clients on their results. In all cases, community members who tested positive for TB received free TB treatment.

Short-term feedback from KNCV in Kano revealed that due to SBC collaboration with Breakthrough ACTION-Nigeria, the WOW truck activity went from screening an average of 100 people to, within a few months, about 200 people. The project presented this result at the National TB Conference in Abuja in November 2021. Breakthrough ACTION-Nigeria messaging assured beneficiaries of the TB services that testing and treatment are free. Once people were aware of what mobilization was about—and the excitement it generated—and what services were provided, more people were willing to get tested at the WOW truck, compared to when WOW trucks deployed prior to partnership with Breakthrough ACTION-Nigeria.

In time, the motorized campaigns grew in popularity and served as a viable channel to offer the community other services including COVID-19 testing, and COVID-19 vaccinations. Breakthrough ACTION-Nigeria presented on their use of motorized campaigns to increase COVID-19 vaccination uptake at the American Society of Tropical and Medical Hygiene 2021 Annual Meeting. The project increased the number of motorized campaign activities during this time. The campaign has evolved into a multi-stakeholder intervention with different public health focuses depending on the state's priority. They offer integrated services while the mobilizers assist community members to get to the services they need. In addition to TB, services offered relate to malaria, HIV, nutrition, and health screening of children under five years. Some states also leveraged the success of these campaigns to deliver non-health-related services, such as finding and providing eligible citizens with national identity numbers.



Lessons Learned and Recommendations

Use TB surveillance data to identify priority intervention areas and map routes.

Access to and utilization of TB surveillance data can improve the yield of targeted TB case-finding interventions, such as motorized campaigns. If two people in a community are known to have TB, there are likely additional unidentified cases. Before entering communities, Breakthrough ACTION–Nigeria, implementing partners, and TBLS used EWORS and EPCON data to detect early outbreaks and list priority areas for the motorized campaign. The data also helped map “TB hotspots,” helping get services where they were most needed.

Intentional collaboration between SBC and service delivery partners helps close gaps in TB case finding.

Through intentional collaborations and partnerships with KNCV and IHVN, the motorized campaign intervention went well beyond increasing reach on information about TB to getting tested for TB. Having both SBC and service delivery partners on board meant that, after Breakthrough ACTION–Nigeria brought SBC methods to the activities, more community members were willing to use the services provided by mobilizers. In this way, motorized campaigns also addressed the accessibility issues (including distance and cost) for communities with limited access to health facilities or services. While having service delivery partners on board, this meant that community members, equipped with information about TB and who may have TB symptoms, were able to immediately obtain TB screening and testing services either through the WOW trucks or WOK tricycles or have their samples taken by other service delivery workers.

Integration with other public health issues leverages resources and improves uptake of services.

After seeing the results of the TB motorized campaigns, other service delivery partners expressed interest in joining the intervention and offering their health services alongside TB. The integrated

approach leveraged resources and improved effectiveness by sharing costs, reduced duplication of efforts, and addressed community members’ health needs more completely. The inclusion of COVID–19 tests and vaccinations and routine immunization in some LGAs, for instance, gave community members the opportunity to receive additional preventive care if needed. The opportunity to receive multiple health services at once increased community members’ willingness to participate. With integration, the motorized campaigns helped KNCV and IHVN achieve their active community TB case-finding goals.

Prepare labs in advance for the surge in sputum samples.

The WOWs and WOKs are equipped with screening and testing technology that increase TB diagnostic service accessibility. Other motorized campaigns without access to WOWs and WOKs, however, had to collect and transport sputum samples to the nearest lab for testing. With the intensified case-finding efforts and resultant surge in samples, labs became overwhelmed. The lack of storage facilities, inadequate number of lab personnel to test the samples, and sub-optimal functioning of GeneXpert machines (i.e., only one or two functional modules) meant many samples were wasted. Before implementing motorized campaigns, involved actors should include labs in campaign planning activities to prepare them for the sample increase. Breakthrough ACTION–Nigeria now holds meetings with lab personnel in advance of intensified case-finding efforts, which has improved their ability to test the number of samples collected.

Invest in communication to improve the quality of sputum samples from community members

Obtaining quality sputum samples from clients remains a challenge. In order to ensure accurate test results, the client must cough up sputum from deep inside their lungs. Clients frequently produce saliva samples instead. Intentional communication can describe the difference between sputum and saliva to clients and coach them on how best to produce a quality sputum sample.

Interviews with Breakthrough ACTION–Nigeria staff informed this story’s development. The interviewees were Ahmad Muaz, Kano State Coordinator; Victor Onah, Benue State Coordinator; Cecilia Kafran, Assistant Program Officer, TB; and Olatunde Toluwase, Senior Program Officer I, TB.