

# SUCCESS STORY: Advancing Operational Research to Stop TB in the Democratic Republic of the Congo

## Overview

The Democratic Republic of the Congo (DRC) has made measurable progress in its health outcomes in recent years thanks to improved leadership, enhanced coordination, and increased investments in priority health issues by both the DRC government and its international partners.

In 2021, the United States Agency for International Development (USAID)-funded [Tuberculosis Data, Impact Assessment and Communications Hub \(TB DIAH\)](#) project began supporting the DRC's ongoing efforts to strengthen its national TB program (NTP). The project worked with the USAID/DRC Mission and the DRC's National TB Program—the Programme National de Lutte contre la Tuberculose (PNLT)—to conduct a gap analysis of the TB system. This analysis revealed a gap in information on the drivers of TB in the DRC. To address this gap and help answer major programmatic questions, TB DIAH recommended operational research (OR) to provide more technical information than the available routinely collected data. The PNLT requested support with the necessary technical capacity, guidance, and funding required for the needed OR studies.

TB DIAH and the PNLT worked together to develop national guidelines for conducting OR in the DRC. Additionally, they organized and led a training in OR for 25 key technical staff within the PNLT. Staff were selected based on their potential to lead OR research in the future.

To reinforce these learnings, TB DIAH provided technical, logistical, and financial support to facilitate three OR studies. These studies, detailed below, focused on topics identified as part of the DRC's priority research agenda during the guideline development process.

TB DIAH began this effort in 2023, meeting with the PNLT, USAID, and local partners to develop a guide for conducting TB OR in the DRC. TB DIAH organized and



Caption: OR priority setting meeting participants from PNLT, the USAID DRC Mission, and TB DIAH. Photo credit: POSAF

facilitated a workshop attended by 20 PNLT staff and other local partners to review and validate the guide and to develop an OR plan for the PNLT. Participants included 17 medical doctors, two nurses, and a data manager.

Using these guidelines, the trainees launched three OR projects in the two provinces prioritized for their high mortality rates among individuals with TB.

In the first study, PNLT researchers focused on “factors related to the mortality of TB patients on treatment.” The descriptive analysis found that among 120 people who had succumbed to TB in the province during the prior year, a majority (53.3%) were suffering from bacteriologically confirmed pulmonary TB.

A subsequent, larger-scale analytic study, conducted in a different province, also examined the factors contributing to TB mortality. This case-control study found that a majority (82%) of the individuals with TB who had passed away (n=347) in that province during the previous year, selected through systematic sampling, had lower levels of education, poorer access to food, and reported experiencing stigma associated with their TB diagnosis prior to their death.

A third study focused on “the prevalence and risk factors related to pulmonary tuberculosis among artisanal miners.” Conducted across 15 mine sites within one province, the study included 1,778 randomly selected participants. The participants were split evenly between miners and non-miner members of the mining

community. Sputum samples were collected by PNLТ researchers then sent to one of four laboratories for biological analysis. Confirmation of TB cases and rifampicin resistance was provided by GeneXpert. The results indicated that the prevalence of TB among non-mining members of the mining community was 5.2%; whereas among miners, it was 8%.

In addition to supporting these studies, TB DIAH assisted in establishing quarterly TB M&E Task Force meetings. These meetings convened PNLТ technical staff, as well as other USAID implementing partners, donors, and technical agencies, to provide both technical and financial support to the M&E division of the PNLТ and to improve its performance in line with the End TB Strategy.

With all TB DIAH-supported OR studies completed, the PNLТ is using the findings of these studies to improve its case management and prioritization of cases according to risk profile. The findings have been presented to the TB M&E Task Force, raising awareness among stakeholders of the main issues and supporting their efforts to address them in their case management plans for the respective implementation sites. The findings will also be discussed during major events like the PNLТ's annual program review and annual planning to ensure the main points are incorporated in the patient management component.

## Key Learnings

Several important insights were gleaned through the implementation of this activity:

- Capacity strengthening done following a systematic approach, including the collaborative development of guidelines, technical capacity strengthening, as well as practical implementation of the learned skill, helps ingrain the learnings into the PNLТ system and ensures the future sustainability of the new practices.
- Most of the capacity strengthening activities were led by experts from the School of Public Health at the University of Kinshasha. This intersectoral collaboration was fundamental to the success of the entire process.

## Testimonials

*“Before this study, when talking about TB deaths, the statement was as simple as ‘At least 13 TB patients die every day.’ That’s all. Now, we can pinpoint the causes accurately because we have the data to do so. We now know that, among the tuberculosis patients who die in the DRC, there are as many who die from HIV co-infection, as many who die from diabetes in addition to tuberculosis, others from pneumonitis in addition to tuberculosis, and still others from clinical deterioration, etc. Moreover, this data allows us to have the different percentages related to these causes.*

*In addition, thanks to the protocol we now have, we will be able to conduct similar studies in other provinces, especially those where the mortality rate of people suffering from tuberculosis is particularly high. With the support of USAID, which supports operational research in the DRC, we are confident that, in two or three years, we will be able to conduct this study, if not all of it, in a minimum of 75% of the country's provinces. It should also be highlighted that, now that the study is being conducted, the DRC through the PNLТ, can now publish on the subject and clarify international opinion on this.”*

**Dr. Mbuyi Stéphane**

Operational Research Officer, Monitoring and Evaluation Division, PNLТ

*“This guide on TB operational research is a valuable document for managers and service providers in the DRC who will be able to use it to identify the various problems related to the functioning and quality of service and to respond with the remedies that result from the operational research. This evidence-based approach can help readjust approaches to TB control in the DRC. Increasing the critical mass of providers using OR in their practices is an important asset for the NTCP to eliminate TB by 2030.”*

**Professor Batumbo Doudou**

Professor of Public Health, School of Public Health, University of Kinshasha

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