

## Faster diagnosis saves lives in Maniema

### BACKGROUND

Maniema, one of the largest provinces in the Democratic Republic of Congo (DRC), is home to more than two million people.<sup>1</sup> Despite the fact that the National Tuberculosis Program (NTP) has been implementing strategies to provide care for and prevent the transmission of multidrug-resistant tuberculosis (MDR-TB) in the region since 2006, MDR-TB continues to spread. The NTP faces numerous difficulties in expanding MDR-TB treatment services throughout the country, as most DRC health facilities lack the equipment needed to promptly detect MDR-TB in the first place.

In September 2013, with USAID support, PATH provided a GeneXpert diagnostic machine to the Maniema province. The GeneXpert can diagnose Rifampicin-resistant forms of tuberculosis in just 90 minutes with over 90% accuracy.<sup>2</sup> With this machine, the laboratory staff in Maniema can rapidly diagnose MDR-TB and initiate patients on lifesaving treatment.

### THE COST OF WAITING FOR A DIAGNOSIS

All samples of suspected MDR-TB obtained from individuals anywhere in the DRC, such as in Maniema, must be sent to the national laboratory in Kinshasa for testing, while local laboratories—closer to where patients



*The distance by road between Kinshasa and Maniema is over 800 miles*

live—lack the equipment and resources needed to diagnose drug-resistant TB. Long diagnostic delays force patients to wait months or even years for the results of an MDR-TB test. Poor road conditions also make it difficult for some residents to access testing facilities, and can hinder specimens from reaching the Kinshasa laboratory in a timely manner. Without a confirmed diagnosis, patients are not able to access the resources needed to treat MDR-TB. As a result, some patients who might otherwise survive this curable disease die while waiting for their test results.

After participating in her third round of standard first-line TB treatment, one woman waited painfully for her MDR-TB test results. Months after being tested she still had no results, and no diagnosis. As her condition worsened, she tearfully asked project staff, “How [will I] survive this bad luck, and who will take care of my children?”



Photo: PATH

*Transportation challenges in Maniema*

<sup>1</sup> African Development Bank Group 2014

<sup>2</sup> FIND 2011 (<http://www.finddiagnostics.org/media/news/110221.html>)

Stories like this are all too familiar in the DRC. In 2012, samples from 45 people thought to have MDR-TB were sent from Maniema to Kinshasa for diagnosis. The results of these tests are still not available nearly two years later. With few other options available, many people have since been forced to travel nearly 300 miles to the city of Bukavu in the neighboring South Kivu province, in hopes of getting a diagnosis and starting treatment. Unfortunately, as one local TB program manager explains, “Many of these people have since died, and the risk of infection in the community continues to grow.”

### INTRODUCTION OF THE GENEXPERT

In order to ensure that this new technology would be used at full capacity, the project trained local laboratory technicians and helped renovate the laboratory itself to ensure that biosafety measures were in place. Since the introduction of the GeneXpert, the laboratory staff in Maniema has been able to rapidly diagnose drug-resistant forms of TB closer to where patients live, and to start patients on treatment without waiting for laboratory confirmation from Kinshasa.

For example, Maniema laboratory staff members were able to test nearly 400 samples from 130 people thought to have MDR-TB within just eight months. Of these, seven new MDR-TB cases were diagnosed and all patients were able to start treatment within three weeks.

Dr. Papy Omeonga, Provincial Minister for Health in Maniema, described the relief felt by



*The installation of the GeneXpert machine in Maniema shows that PATH is working hard to strengthen provincial laboratories for improved MDR-TB diagnosis.*

the local health system in finally being able to alleviate some of the anxiety felt by patients thought to have MDR-TB. Dr. Omeonga proclaimed that “the installation of the GeneXpert machine in the province has given us renewed hope, not only because results can now be obtained in a single day, but also because treatment can be initiated that much more quickly.”

The success of the GeneXpert in improving the diagnostic and treatment outcomes of persons suffering from MDR-TB in the DRC underlines the crucial role of PATH in introducing new, innovative technologies into the global fight against TB.